



**Prepared For:**

City of Long Beach  
333 W. Ocean Blvd., 5th Floor  
Long Beach, CA 90802

# The River Park Residential Project

## ENVIRONMENTAL IMPACT REPORT

SCH NO. 2021020492



**Westlake Village Office**  
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Westlake Village, CA 91361



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Los Angeles, CA 90014

January, 2022

**Draft**

**Environmental Impact Report**

**for the**

**River Park Residential Project**

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**JANUARY 2022**

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## EXECUTIVE SUMMARY

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In accordance with CEQA Guidelines Section 15123, this section of the Draft EIR provides a brief description of the Project; identifies significant effects and proposed mitigation measures or alternatives that would reduce or avoid those effects; and describes areas of controversy and issues to be resolved.

### **1. PURPOSE OF THIS ENVIRONMENTAL IMPACT REPORT**

This document is a Draft Environmental Impact Report (EIR) with respect to the proposed River Park Residential Project (Project) in the City of Long Beach (the City).

The California Environmental Quality Act (CEQA) requires that projects subject to an approval action by a public agency of the State of California, and that are not otherwise exempt or excluded, undergo an environmental review process to identify and evaluate potential impacts. Section 15050 of the CEQA Guidelines states that environmental review shall be conducted by the Lead Agency, defined in CEQA Guidelines Section 15367 as the public agency with principal responsibility for approving a project. The Project is subject to approval actions by the City, which is therefore Lead Agency for CEQA purposes.

### **2. OVERVIEW OF THE PROPOSED PROJECT**

The Project is located near the western edge of the City of Long Beach, south of the San Diego (I-405) Freeway, east of the Los Angeles River, north of Wardlow Road, and west of the Wrigley Heights neighborhood.

The proposed Project includes 226 detached and attached single-family units on the southern 15 acres of the 20-acre Project Site and 5 acres of Public Open Space on the northern portion of the Site. The Project would include 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units. The proposed density is approximately 14.6 dwelling units (DU)/acre. The residential development would also include a clubhouse and pool towards the southern portion of the development and a 5-acre park located in the northern portion of the site.

Primary access to the residential development would be provided from a private gated street on Wardlow Road. An emergency access is proposed at the northeast corner of the complex, providing access at the intersection of Baker Street and Golden Avenue. The proposed circulation system within the complex is comprised of a looped roadway system with internal connections to each of the proposed residential housing units and parking areas within the complex. Vacation of the unimproved right-of-way of Baker Street west of Golden Avenue is proposed as part of the project.

The City of Long Beach, acting as Lead Agency, will consider approval of the following actions: Zone Change from CS and R-1-N to RP-1; Vesting Tentative Tract Map; Vacation of the unimproved right-of-way for Baker Street west of Golden Avenue; General Plan Conformance for the vacation of right of way; Development Agreement and Site Plan Review.

### **3. AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED**

Based on input received during the scoping process, issues known to be of concern in the community include, but are not necessarily limited to: the aesthetic look of the project, the impact on open space and recreational amenities, and the remediation of the site. This DEIR addresses each of these issues.

### **4. SUMMARY OF ALTERNATIVES**

Section 15126.6(a) of the CEQA Guidelines requires an EIR to “describe the 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 will avoid or substantially lessen any of the significant effects of the Project and evaluate the comparative merits of the alternatives.”

The City considered a No Project Alternative, that would continue the exiting condition of the site; a reduced density alternative and a single-family residential alternative. These alternatives would create variances in impact levels but would not avoid any of the significant effects of the Project and would not achieve the City’s objectives as successfully as the Project.

### **5. SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Based on the Initial Study (February 2021), the City determined that preparation of an EIR was required to further evaluate potentially significant impacts of the Project related to the following environmental topics: Aesthetics, Air Quality, Biology, Cultural, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Recreation, Transportation, Tribal, and Utilities.

Impacts related to Agricultural and Forestry Resources, Energy, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, and Wildfire were determined to be less than significant in the Initial Study. These environmental topics are not evaluated further in this Draft EIR.

**Table ES-1: Summary of Findings**, presents a summary of findings for each of the resources analyzed in **Section IV: Environmental Impact Analysis** of this Draft EIR.

**Table ES-1: Summary of Findings**

Impact	Mitigation Measures	Significance after Mitigation
<b>Aesthetics</b>		
<p><b>Threshold AES-1:</b> In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the Site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?</p>	<p>None required.</p>	<p>Less than significant.</p>
<b>Air Quality</b>		
<p><b>Threshold AQ-1:</b> Conflict with or obstruct implementation of the applicable air quality plan?</p>	<p><b>MM AQ-1.</b> On-site construction equipment fleet must meet Environmental Protection Agency (EPA) Tier 4 Final standards for all off-road diesel-powered construction equipment greater than 50 horsepower (hp) and would require all construction equipment to be outfitted with BACT devices certified by the California Air Resources Board (CARB).</p>	<p>Less than significant with mitigation incorporated.</p>
<p><b>Threshold AQ-2:</b> Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?</p>	<p><b>MM AQ-1.</b> On-site construction equipment fleet must meet EPA Tier 4 Final standards for all off-road diesel-powered construction equipment greater than 50 hp and would require all construction equipment to be outfitted with Best Available Control Technology (BACT) devices certified by CARB.</p>	<p>Less than significant with mitigation incorporated.</p>
<p><b>Threshold IV.AQ-3:</b> Expose sensitive receptors to substantial pollutant concentrations?</p>	<p><b>MM AQ-2</b> would incorporate the following design features to reduce potential cancer risk:</p> <ul style="list-style-type: none"> <li>• Locate outdoor areas, such as balconies and courtyards, as far from the freeway and roadway segment as possible;</li> <li>• Plant vegetation between residential receptors and the freeway;</li> <li>• Install, operate, and maintain a heating, ventilation, and air condition (HVAC) system that uses high-efficiency filters of</li> </ul>	<p>Less than significant with mitigation incorporated.</p>

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Threshold AQ-4:</b> Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?</p>	<p>Minimum Efficiency Reporting Value (MERV) 14 or higher for the residential units (suggested use of MERV 16);</p> <ul style="list-style-type: none"> <li>• Locate the air intakes for the uses as far from the freeway as possible; and</li> <li>• Provide a disclosure letter to all new residents that discusses the potential risk from living within close proximity of the freeway and roadway segment, and points out that opening windows reduces the effectiveness of implemented reduction measures and increases individuals' exposure and hence risk.</li> </ul> <p>None required.</p>	<p>Less than significant.</p>

**Biology**

<p><b>Threshold BIO-1:</b> Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p>	<p><b>MM-Bio-1:</b> Migratory Birds. To avoid impacts to birds nesting onsite, the following mitigation shall be implemented:</p> <ul style="list-style-type: none"> <li>• Proposed ground clearing activities within 300 feet of potential nesting sites should take place outside of the breeding bird season which generally runs from February 1– August 31.</li> <li>• If project activities cannot feasibly avoid the breeding bird season, beginning thirty days prior to the disturbance of suitable nesting habitat, the applicant shall arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within properties adjacent to the project site, as access to adjacent areas allows. The surveys shall be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work If a</li> </ul>	<p>Less than significant.</p>
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Impact	Mitigation Measures	Significance after Mitigation
	<p>protected native bird is found, the applicant shall delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat for the observed protected bird species until August 31. Alternatively, the Qualified Biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest or as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. The buffer zone from the nest shall be established in the field with flagging and stakes. Construction personnel shall be instructed on the sensitivity of the area. The applicant shall record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds. Such record shall be submitted and received into the case file for the associated discretionary action permitting the project.</p>	
<p><b>Threshold BIO-2:</b> Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><b>Cultural</b></p>		
<p><b>Threshold CUL-1:</b> Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?</p>	<p>None required.</p>	<p>Less than significant.</p>

Impact	Mitigation Measures	Significance after Mitigation
<b>Threshold CUL-2:</b> Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	None required.	Less than significant.
<b>Energy</b>		
<b>Threshold ENE-1:</b> Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	None required.	Less than significant.
<b>Threshold ENE-2:</b> Conflict with or obstruct a State or local plan for renewal energy or energy efficiency?	None required.	Less than significant.
<b>Geology And Soils</b>		
<b>Threshold GEO-1:</b> Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	None required.	Less than significant.
<ul style="list-style-type: none"> <li>a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</li> <li>b. Strong seismic ground shaking.</li> <li>c. Seismic-related ground failure, including liquefaction and lateral spreading</li> </ul>		
<b>Threshold GEO-2:</b> Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	None required.	Less than significant.
<b>Threshold GEO-3:</b> Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<b>MM GEO-1: Worker’s Environmental Awareness Program (WEAP)</b> Prior to the start of the proposed Project activities, all field personnel will receive a worker’s environmental awareness training on	Less than significant with mitigation incorporated.

Impact	Mitigation Measures	Significance after Mitigation
	<p>paleontological resources. The training will provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the paleontological monitor, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Project Paleontologist. The training will be developed by the Project Paleontologist and can be delivered concurrent with other training including cultural, biological, safety, etc.</p> <p><b>MM GEO-2: Paleontological Mitigation Monitoring</b></p> <p>Prior to the commencement of ground-disturbing activities, a professional paleontologist will be retained to prepare and implement a paleontological resource mitigation and monitoring plan (PRMMP) for the proposed Project. The PRMMP will describe the monitoring required during excavations that extend into older Quaternary (Pleistocene) age sediments, and the location of areas deemed to have a high paleontological resource potential. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted, based on the geologic conditions at depth, he or she may recommend that monitoring be reduced or cease entirely.</p> <p><b>MM GEO-3: Fossil Discoveries</b></p> <p>In the event that a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:</p> <p><b>Salvage of Fossils</b></p>	

Impact	Mitigation Measures	Significance after Mitigation
	<p>If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) should recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared for the project. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.</p> <p><b>Fossil Preparation and Curation</b></p> <p>The PRMMP will identify the museum that has agreed to accept fossils that may be discovered during project-related excavations. Upon completion of fieldwork, all significant fossils collected will be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens will be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation will be assessed by the repository and will be the responsibility of the client.</p> <p><b>MM GEO-4: Final Paleontological Mitigation Report</b></p> <p>Upon completion of ground disturbing activity (and curation of fossils if necessary) the Project Paleontologist should prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report should include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.</p>	

Impact	Mitigation Measures	Significance after Mitigation
<b>Greenhouse Gas</b>		
<b>Threshold GHG-1:</b> Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	None required.	Less than significant.
<b>Threshold GHG-2:</b> Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	None required.	Less than significant.
<b>Hazards and Hazardous Materials</b>		
<b>Threshold HAZ-1:</b> Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?	None required.	Less than significant.
<b>Threshold HAZ-2:</b> Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment?	None required.	Less than significant.
<b>Threshold HAZ-3:</b> Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	None required.	Less than significant.
<b>Hydrology</b>		
<b>Threshold HWQ-1:</b> Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	None required.	Less than significant.
<b>Threshold HWQ-2:</b> Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.	None required.	Less than significant.

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Threshold HWQ-3:</b> Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.</p>	None required.	Less than significant.
<b>Noise</b>		
<p><b>Threshold NOI-1:</b> Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</p>	<p><b>MM NOI-1: Construction Noise</b>                      The Applicant must utilize, without limitation, the following construction best management practices (BMPs):</p> <ul style="list-style-type: none"> <li>• Shroud or shield all impact tools, and muffle or shield all intake and exhaust port on power equipment to reduce construction noise by 10 dB or more.</li> <li>• If feasible, schedule grading activities so as to avoid operating numerous pieces of heavy-duty off-road construction equipment (e.g., backhoes, dozers, excavators, loaders, or rollers) simultaneously in close proximity to the boundary of properties of off-site noise sensitive receptors surrounding the Project Site to reduce construction noise levels by approximately 14 dBA.</li> <li>• Where feasible, temporary barriers including, without limitation, sound blankets on existing fences and walls, or freestanding portable sound walls, must be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards.</li> </ul>	Less than significant with mitigation incorporated.
<p><b>Threshold NOI-2:</b> Generation of excessive groundborne vibration or groundborne noise levels?</p>	None required.	Less than significant.
<b>Recreation</b>		
<p><b>Threshold REC-1:</b> Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</p>	None required.	Less than significant.

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Threshold REC-2:</b> Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?</p>	None required.	Less than significant.
<b>Transportation</b>		
<p><b>Threshold TRA-1:</b> Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.</p>	None required.	Less than significant.
<p><b>Threshold TRA-2:</b> Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).</p>	None required.	Less than significant.
<p><b>Threshold TRA-3:</b> Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</p>	<p><b>TRA-1: Traffic Signal</b>                      The Project Applicant shall install traffic signal related equipment to current CA MUTCD and/or City of Long Beach Standards, at the intersection of Wardlow Road and the proposed entry to the project, generally in conformance with the “Conceptual Traffic Signal Design” prepared by Subdivider, dated August 25, 2020. Installation of the traffic signal related equipment may include, but not be limited to the following i. Traffic Signal indicators to the most current City standard. ii. Vehicular detection shall be installed on all approaches to the signalized intersection. This may include presence, mid or advance detection per City direction. Options will include standard Type E loops or video detection. iii. All pedestrian push buttons and indicators shall be to the most current City Standards. iv. The Subdivider shall install Emergency Vehicle Pre-emption (EVPE) equipment. The equipment and installation must be completed per the most current City Standard. v. The Subdivider shall install a GPS Module at the traffic signal. The GPS Modules create accurate time-based communications between nearby traffic signals. vi. The Subdivider shall install a new traffic signal controller based on the most current City Standard [McCain 2070 Controllers]. vii. Subdivider shall install 96 count fiber interconnect cable to the satisfaction of the City’s Traffic Engineer, but at a minimum from the proposed traffic signal to Magnolia Avenue. viii. Subdivider shall install flashing beacons, on overhead mast arms attached to utility</p>	Less than significant after mitigation.

Impact	Mitigation Measures	Significance after Mitigation
<p><b>Threshold TRA-4:</b> Result in inadequate emergency access?</p>	<p>poles, on both approaches to the proposed traffic signal, 450 feet from the stop limit line.</p> <p>None required.</p>	<p>Less than significant.</p>
<p><b>Tribal Cultural</b></p>		
<p><b>Threshold TCR-1:</b> Listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in Public Resources Code (PRC) § 5020.1(k).</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><b>Threshold TCR-2:</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 PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>	<p><b>MM TCR-1: Retain a Native American Monitor/Consultant</b></p> <p>The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both ancestrally affiliated with the project area and approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the Native American Heritage Commission’s (NAHC) Tribal Contact list for the area of the project location. This list is provided by the NAHC. A Native American monitor shall be retained by the Lead Agency or owner of the project to be on site to monitor all project-related, ground-disturbing construction activities (i.e., boring, grading, excavation, potholing, trenching, etc.). A monitor associated with one of the NAHC recognized Tribal governments which have commented on the project shall provide the Native American monitor. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the Project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day’s activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Project Site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have</p>	<p>Less than significant with mitigation incorporated.</p>

Impact	Mitigation Measures	Significance after Mitigation
	<p>indicated that the Site has a low potential for impacting Tribal Cultural Resources (TCRs).</p> <p><b>MM TCR-2: Unanticipated Discovery of Tribal Cultural and Archaeological Resources</b></p> <p>Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a “historical resource” or “unique archaeological resource”, time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources.</p> <p><b>MM TCR-3: PRC Section 21083.2(b)</b></p> <p>Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. All TCRs shall be returned to the Tribe. Any historic archaeological material that is not Native American in origin shall be curated at a public, nonprofit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe or a local school or historical society in the area for educational purposes.</p>	

Impact	Mitigation Measures	Significance after Mitigation
	<p><b>MM TCR-4: Unanticipated Discovery of Human Remains and Associated Funerary Objects</b></p> <p>Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone, within 24 hours, the NAHC and PRC 5097.98 shall be followed.</p> <p><b>MM TCR-5: Resource Assessment &amp; Continuation of Work Protocol</b></p> <p>Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).</p> <p><b>MM TCR-6: Kizh-Gabrieleno Procedures for Burials and Funerary Remains</b></p> <p>If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for</p>	

Impact	Mitigation Measures	Significance after Mitigation
	<p>burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.</p> <p><b>MM TCR-7: Treatment Measures</b></p> <p>Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains. Each occurrence of</p>	

Impact	Mitigation Measures	Significance after Mitigation
	<p>human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The Site of reburial/repatriation shall be on the Project Site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.</p>	
<b>Utilities</b>		
<p><b>Threshold UTI-1:</b> 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?</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><b>Threshold UTI-2:</b> Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><b>Threshold UTI-3:</b> Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><b>Threshold UTI-4:</b> Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?</p>	<p>None required.</p>	<p>Less than significant.</p>

# I. INTRODUCTION

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## 1. PURPOSE OF THIS ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Sections 21000, et seq.), and its implementing guidelines (14 CCR 15000 et seq., hereinafter “CEQA Guidelines”), requires that lead agencies consider the potential environmental consequences of projects over which they have discretionary approval authority prior to taking approval action on such projects.

The subject of this Draft EIR is the proposed River Park Residential Project in the City of Long Beach. The proposed development and its associated approval actions constitutes a “Project” as defined in CEQA Guidelines Section 15378.

CEQA defines “Lead Agency” as the public agency with primary responsibility for approving a project and thus has primary responsibility for ensuring compliance with the CEQA process. The City of Long Beach (City) is the “Lead Agency” for this document.

A lead agency may prepare an Environmental Impact Report (EIR) for any project that may have a significant impact on the environment. As described in CEQA Guidelines Sections 15121, an EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effects of a project, identify possible ways to minimize any significant effects, and describe reasonable project alternatives. Public agencies shall consider the information in the EIR, along with other information that may be presented to the agency, prior to approving the Project.

Therefore, the purpose of this Draft EIR is to focus the discussion on the Project’s potential environmental effects that the City of Long Beach (City), as the Lead Agency, has determined to be or potentially may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce or avoid the Project’s significant environmental impacts.

This Draft EIR serves as the environmental document for all actions associated with the Project. This EIR is a “Project EIR” as defined by CEQA Guidelines Section 15161 and, as such, serves as an informational document for the general public and Project decision-makers. This Draft EIR is also intended to cover all state, regional, and local government discretionary approvals that may be required to construct or implement the Project.

## 2. ENVIRONMENTAL REVIEW PROCESS

The CEQA Guidelines define a process for environmental review that includes a series of steps that must be completed prior to any action taken by the Lead Agency on a project.

## Scoping Process

An Initial Study was prepared for the proposed Project and released with a Notice of Preparation (NOP) for a 30-day public review period during February and March 2021. The Initial Study, NOP, and comment letters are included in **Appendix I** of this Draft EIR.

The City determined through the Initial Study that the proposed Project would result in less than significant impacts with respect to Aesthetics, Agriculture and Forestry, Energy, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Tribal Cultural Resources, Utilities, and Wildfire. These areas are not analyzed further in this Draft EIR except that, based on comment received during the scoping process, it was determined to including evaluation of Land Use and Planning in the Draft EIR. For a discussion of the environmental issues that were scoped out of this Draft EIR, refer to **Section 6.0: Other Environmental Issues**.

## Review and Comment on the Draft Environmental Impact Report

CEQA requires that the Lead Agency provide the public and agencies the opportunity to review and comment on the Draft EIR. This Draft EIR has been published and distributed for a 60-day review period starting January 18, 2022 and ending March 21, 2022. Copies of this Draft EIR have been sent to the State Clearinghouse, responsible agencies, other agencies that have commented on the NOP, and to all interested parties that have requested notice and copies of the Draft EIR.

The Draft EIR is also available for review at the following locations:

- City of Long Beach, Department of Development Services, Permit Center  
411 W. Ocean Boulevard, 2<sup>nd</sup> floor Long Beach, CA 90802;
- Billie Jean King Main Library  
200 W. Broadway  
Long Beach CA 90802; and
- Online at <https://www.longbeach.gov/lbds/planning/environmental/reports/>

Interested individuals, organizations, responsible agencies, and other agencies can provide written comments about the Draft EIR addressed to:

Amy Harbin, Planner  
Development Services Department  
City of Long Beach  
411 W. Ocean Boulevard  
Long Beach, CA 90802

or by e-mail at [LBDS-EIR-Comments@longbeach.gov](mailto:LBDS-EIR-Comments@longbeach.gov)

Comments received via other means or addressed to other recipients, including but not limited to social media, will not be included or considered. After completion of the review period, a Final EIR will be prepared that includes responses to comments submitted on the Draft EIR and any necessary corrections or additions to the Draft EIR. The Final EIR will be made available to agencies and the public prior to the City's determination on the Project. Once the Final EIR is complete, the City may certify the Final EIR, prepare Findings, adopt a mitigation monitoring and reporting program, and issue a Notice of Determination, which is the final step in the CEQA process.

### **3. ORGANIZATION OF THE DRAFT EIR**

As stated, a principal objective of CEQA is to ensure that the environmental review process be a public one. In meeting this objective, an EIR informs members of the public, reviewing agencies, and decision-makers of the physical impacts associated with a project. Sections of the Draft EIR are organized as follows:

**Executive Summary** provides a summary of the Project, impacts, mitigation measures and alternatives.

**Section I: Introduction** reviews the purpose, scope, and organization of the document.

**Section II: Project Description** presents a description of the proposed Project including the objectives, locations, components, and characteristics.

**Section III: Environmental Setting** provides a summary of the context within which the Project would occur.

**Section IV: Environmental Impact Analysis** presents the existing conditions, Project impact analysis, mitigation measures, and conclusions regarding the level of significance after mitigation.

**Section V: Alternatives** discusses alternatives to the proposed Project that have been developed and analyzed to provide additional information on ways to avoid or lessen the impacts of the Project.

**Section VI: Other Environmental Considerations** discusses other topics required by CEQA, including Significant Irreversible Change, Growth-Inducing Impacts and Impacts Found Not to Be Significant.

**Section VII: References** lists the principal documents, reports, maps, and other information sources referenced in this Draft EIR.

**Section VIII: Preparers of the EIR and Persons Consulted** lists persons involved in the preparation of this Draft EIR or who contributed information incorporated into this Draft EIR.

**Appendices** to this Draft EIR include the Initial Study, NOP, and written comments, as well as technical reports and data used and referenced in the Draft EIR.

## II. PROJECT DESCRIPTION

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This section describes the location, objectives, and characteristics of the River Park Residential Project (Project) and the intended uses of this EIR, as required by the California Environmental Quality Act (CEQA) Guidelines Section 15124.<sup>1</sup> A general description of the Project's technical, economic, and environmental characteristics is provided in this section. Please see **Section VIII** for a glossary of terms, definitions, and acronyms used in this Draft EIR.

### 1. PROJECT LOCATION AND SURROUNDING USES

The City of Long Beach (City) is located at the southwestern corner of Los Angeles County (County) along the coastline as illustrated by **Figure II.1: Regional Vicinity Map**. As presented by **Figure II.2: Project Location Map**, the Project Site is located within the neighborhood of Wrigley Heights near the western edge of the City. The surrounding of the Project Site encompasses Interstate 405 (I-405) to the north, Golden Avenue to the east, Wardlow Road to the south, and the County-owned open space corridor bordering the Los Angeles River to the west. Two parks, Baker Street Park and Wrigley Heights Dog Park, are adjacent on the east side of the Project Site.

The Project Site is located in an urbanized area surrounded by residential development and parks to the east and south of the Project. Existing recreational trails are available along the Los Angeles River channel. Past the Los Angeles River is Interstate 710 (I-710) and more residential development. There is a vacant site north of I-405.

### Project Site Background and Existing Condition

This section provides an overview of the historical use of the Project Site and the existing site conditions.

#### *Historic Use*

From 1926 to 1988, the Project Site was used for the treatment of oil field production brines, water, and wastewater, and other fluid by-products generated by oil production activities in the area. Initially, the water treatment process occurred in settling basins designed and constructed to remove oil and sediment from the production water. The treated water was discharged to the Sanitation Districts of Los Angeles County (LACSD) sewer system under a permit issued by LACSD. Crude oil was recovered in the treatment process for recycling as a by-product.

A water treatment facility was constructed on site in 1959, consisting of five circular concrete-walled skimming basins and associated pumps, above ground storage tanks (ASTs), pipelines, and related small

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<sup>1</sup> California Code of Regulation, Title 14, Section 15000 et seq.

buildings and facilities. As illustrated by **Figure II.3: Former Water Treatment Facility Diagram**, the treatment plant was located north of the two rectangular-shaped, clay-lined settling basins in the southern portion of the site, south of Baker Street. A settling pond was located north of Baker Street. The facility ceased operations in 1988.

### On-site Remedial Actions

In October 2000, the City of Long Beach Fire Department (LBFD) directed that liquid hydrocarbon products, wastewater and sludge be removed from the site and that hydrocarbon impacted soils and groundwater be remediated. Buildings, ASTs, and related aboveground structures were cleaned, demolished, and disposed of, off site in 2000 and 2001. In 2002, the LBFD directed that liquid hydrocarbon products, wastewater, and sludge be removed from the site under a Site Remediation Permit issued by the City, coordinated with the LBFD, and the City of Long Beach Department of Health and Human Services (LBDHHS). Soil and groundwater impacted by hydrocarbons were required to be remediated under the oversight of the LBDHHS and Los Angeles Regional Water Quality Control Board (LARWQCB). A Consent Decree directed that remediation of Basin 1 take place in accordance with the standards specified by LBDHHS in 2002.<sup>2</sup> These standards were described in a series of workplans prepared by the site owner and approved by the regulatory agencies. These workplans identified requirements for boring, soil sampling, monitoring wells, and soil remediation through a bioremediation filtration process. The process of bioremediation involves incorporating microorganisms into hydrocarbon contaminated soil to convert the hydrocarbon compounds into harmless products. Regular tilling of the soil to incorporate and activate microorganisms is ongoing. Other ongoing activities include groundwater monitoring for hydrocarbon plume and arsenic presence in the groundwater.

Additional efforts were made to reduce vapor phase benzene concentrations adjacent to Golden Avenue from 2012 to 2014, with the installation of a vapor extraction system (VES). A soil VES uses vacuum pressure to remove volatile and some semi-volatile contaminants (VOCs and SVOCs) from the soil by installing vapor extraction wells underground to capture VOCs. Once the VOCs and SVOCs are removed from the soil, they are delivered to an aboveground treatment system where the treated emissions are released. In April 2015, additional VES units were employed in the northeastern part of the Project Site. LARWQCB further approved the implementation of Tesoro Expanded Remedial Action Plan for additional VES wells on February 8, 2017, and further amended the plan in December 27, 2018. The amended Tesoro Expanded Remedial Action Plan involves the installation of twelve horizontal VES wells and four angled VES wells to extend beneath Golden Avenue from the east side of the Project Site and five vertical VES wells beneath the Project Site.<sup>3</sup>

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2 Mearns Consulting LLC. *Human Health Risk Assessment- 712 Baker Street Long Beach*. California 90806. January 14, 2016.

3 California Environmental. *Remedial Action Plan- Proposed Residential Redevelopment Project*. Oil Operators, Inc. (OOI) Property. September 2021.

Continuous environmental testing and investigations were conducted from the early 1980s to 2019, alongside bioremediation efforts on site from the 1980s under permits issued by the City. The test data from these investigations were used to develop the Remedial Action Plan (RAP), described below.

### **Remedial Action Plan (RAP)**

The RAP defines the scope of the remediation activities and develops a plan of action to achieve cleanup goals. The RAP needs to be completed to allow the issuance of a No Further Action determination by the lead enforcement agencies, in this case are both the City of Long Beach Department of Health and Human Services and LARWQCB. Monitoring and testing activities will be conducted to determine when the cleanup goals have been achieved.

In August 2019, a Draft RAP was submitted to the LARWQCB for review. On May 21, 2020, the LARWQCB issued comments on the Draft RAP requesting additional discussion regarding cleanup goals and the preparation of an updated Human Health Risk Assessment (HHRA), consistent with current requirements, along with other updates. A revised RAP was prepared and submitted in August 2021. Approval and implementation of the RAP will be required prior to development of the proposed residential uses. For additional discussion of the RAP please refer to **Section IV.H: Hazards and Hazardous Materials**.

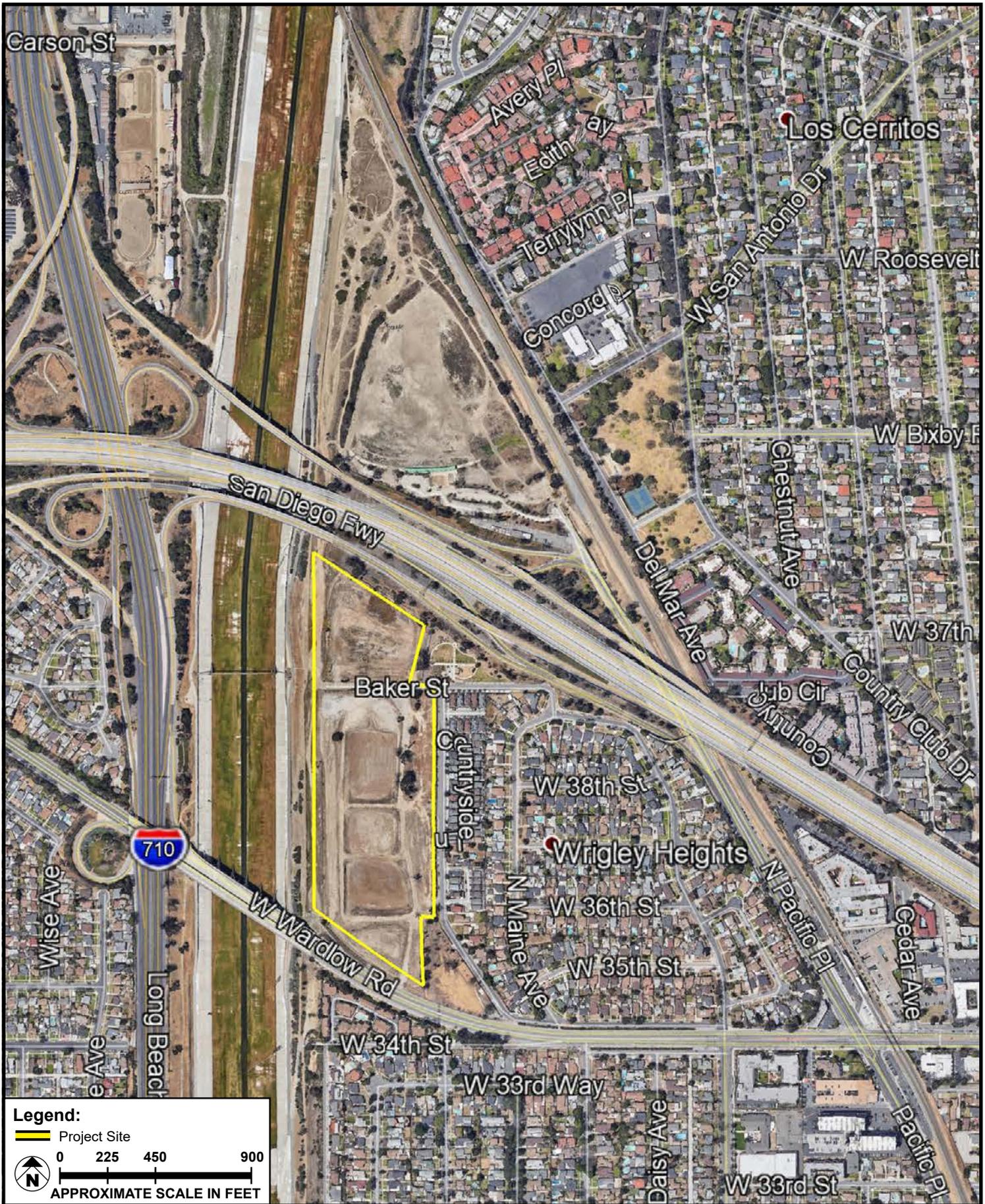
### ***Existing Condition***

The Project Site is currently vacant and fenced with a mix of chain link fences, wooden fences, and hedges. Access to the Project Site is secured by chain link fence gates adjacent to Wardlow Road and Golden Avenue. The vacant site contains remnants of the water treatment facilities removed in 2000 and 2001 including, building foundations, roads, and underground pipes. The Project Site also contains two water treatment basins which present as large flat areas. Elevations on the property range from 20 to 40 feet.

As discussed previously, remediation of the residual oil in the settling basins has been ongoing since 2001 and the soil in the settling basins shown in **Figure II-3** has been regularly tilled as part of the remediation activities.

Because of the long-term use of the Site as a wastewater collection and treatment facility, and the ongoing remediation activities, existing vegetation on the property is dominated by nonnative plant species, with a few native plant species present. Nonnative tree species, including several eucalyptus species, Peruvian, and Brazilian Pepper, and California and Canary Island Palm Trees are also present on the Site.





SOURCE: Google Earth - 2021

FIGURE II.2

Note: All locations and dimensions of the former facilities in the diagram are approximate and for analysis purposes only.



SOURCE: Google Earth - 2021

FIGURE II.3

## 2. LAND USE AND ZONING

### City of Long Beach General Plan

As illustrated by **Figure II.4: Long Beach General Plan 2040 Place Types and Height Standards**, the Project Site is designated Founding and Contemporary Neighborhood (FCN). As set forth in the Land Use Element of the Long Beach General Plan, the FCN is a Neighborhood Place Type. The Long Beach General Plan Land Use Element defines Place Types as a more flexible and comprehensive approach to land use planning that de-emphasizes specific uses and focuses on the form and character of neighborhoods. Place Types allow for a wide variety of compatible and complementary uses in addition to the primary permitted land uses.<sup>4</sup>

Under the FCN general plan designation, the allowed uses include single-family and low-density housing and neighborhood-serving low-intensity commercial uses. Residential uses are allowed at a density of 7-18 dwelling units per acre (du/ac). The maximum height allowed is 2 stories per the General Plan.

The Project has a density of approximately 14.6 du/ac within the 15.5 acres proposed for residential development, which is within the range of density allowed under the general plan designation. The Project contains 53 three-story units on approximately 3.54 acres of the site along W. Wardlow Road. The applicant proposes to use a development standards waiver or regulatory concession under California Government Code Section 65915 in exchange for providing affordable housing on-site. In order to qualify for the waiver or regulatory concession, the applicant will provide either (i) no less than five percent (5%) of the total housing units for very low income households as defined in Section 50105 of the California Health & Safety Code, or (ii) no less than ten percent (10%) of the total housing units for lower income households as defined in Section 50079.5 of the California Health & Safety Code. The development standards waiver or regulatory concession would allow the Project to include 3-story buildings in an area designated for 2-story buildings under the General Plan. The City is required to approve the waiver or concession if the provisions of state law are met, unless it finds the waiver or concession will not result in cost reductions, would have a specific, adverse impact, or would be contrary to state or federal law.

### City of Long Beach Municipal Code

#### *Zoning*

The existing zoning on site is Commercial Storage (CS) and Single-Family Residential Standard Lot (R-1-N) as presented by **Figure II.5: Zoning Map** with a Horse (H) Overlay District over a portion of the project site. The CS zone allows for commercial land use consisting of the rental of space for the

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<sup>4</sup> Long Beach Development Services. *General Plan- Land Use Element*. December 2019.

storage of personal property, such as mini-warehouse and the storage of recreational vehicles.<sup>5</sup> The R-1-N district is a single-family residential district with standard lots.<sup>6</sup> The H Overlay District modifies the underlying zoning to allow for the keeping of horses and horse related facilities on private properties in the City and outlines the requirements and standards for horse keeping, including definition of the number of horses allowed in different zones.<sup>7</sup>

A zone change to Residential Planned Unit Development (PUD) is proposed. The Residential PUD zone allows greater flexibility in development standards to encourage innovative and creative design through good urban planning principals, with efficient use of land, a mixture of densities, and diverse housing opportunities and on-site community facilities. Typically, a PUD development would feature smaller lots and attached residential units with common open space and community amenities as compared to R-1-N zoned residential uses. This proposed Residential PUD zoning would be consistent with the General Plan FCN designation.

### ***Leadership in Energy and Environmental Design (LEED) Requirement***

The City requires certain types of development to meet LEED certification standards as outlined in the Long Beach Municipal Code (LBMC) 21.45.400. The green building standards for public and private development outlined by the municipal code direct development in the City to be designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. The goals of the Green Building standard include protecting occupant health, improving employee productivity, and using resources more efficiently while reducing the overall impact to the environment. Section 21.45.400.C.1.a requires new residential or mixed-use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross sq. ft. or more to meet the intent of LEED at the certified level.<sup>8</sup> This requirement applies to the proposed Project.

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- 5 City of Long Beach. *Long Beach Municipal Code*. Chapter 21.32- Commercial Districts. [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.32CODI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.32CODI). Accessed 4/6/2021.
  - 6 City of Long Beach. *Long Beach Municipal Code*. Chapter 21.31- Residential Districts. [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.31REDI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.31REDI). Accessed 4/6/2021.
  - 7 City of Long Beach. *Long Beach Municipal Code*. Chapter 21.38- Horse Overlay District. [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.38HOVDI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.38HOVDI). Accessed 4/6/2021.
  - 8 City of Long Beach. *Long Beach Municipal Code*. Chapter 21.45.400- Green Building Standards for Public and Private Development. [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.45SPDEST\\_21.45.400GRBUSTPUPRDE](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.45SPDEST_21.45.400GRBUSTPUPRDE). Accessed 4/6/2021.

# Long Beach General Plan 2040

PlaceTypes and Height Standards  
Approved by Resolution 19-0189  
December 3, 2019

### PlaceTypes

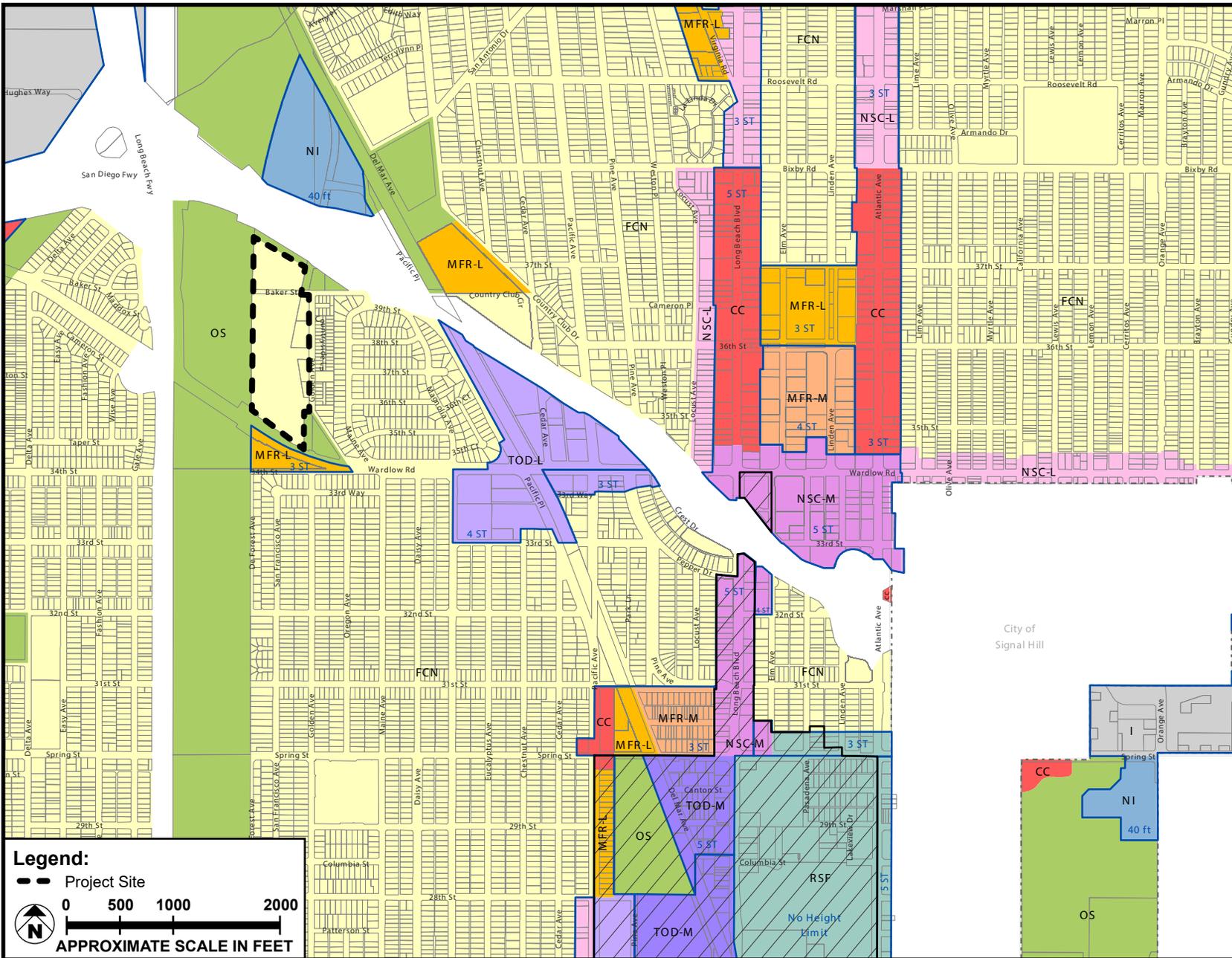
- CC, Community Commercial
- DT, Downtown
- FCN, Founding and Contemporary Neighborhood
- I, Industrial
- MFR-L, Multiple Family Residential Low Density
- MFR-M, Multiple Family Residential Moderate Density
- NI, Neo Industrial
- NSC-L, Neighborhood Serving Center or Corridor Low Density
- NSC-M, Neighborhood Serving Center or Corridor Moderate Density
- OS, Open Space
- RSF, Regional Serving Facility
- TOD-L, Transit-Oriented Development Low Density
- TOD-M, Transit-Oriented Development Moderate Density
- WF, Waterfront

### Height Standards

- Height (ft - feet and/or ST - stories. If not indicated, standard is 2 stories.)

### Other City Layers

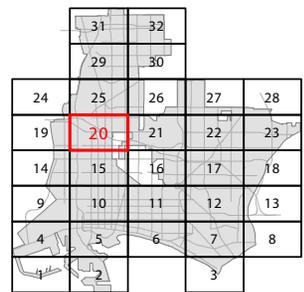
- Specific Plan and/or Downtown Plan Boundaries (shown for informational purposes only)
- Parcel
- Long Beach City Boundary



**Legend:**

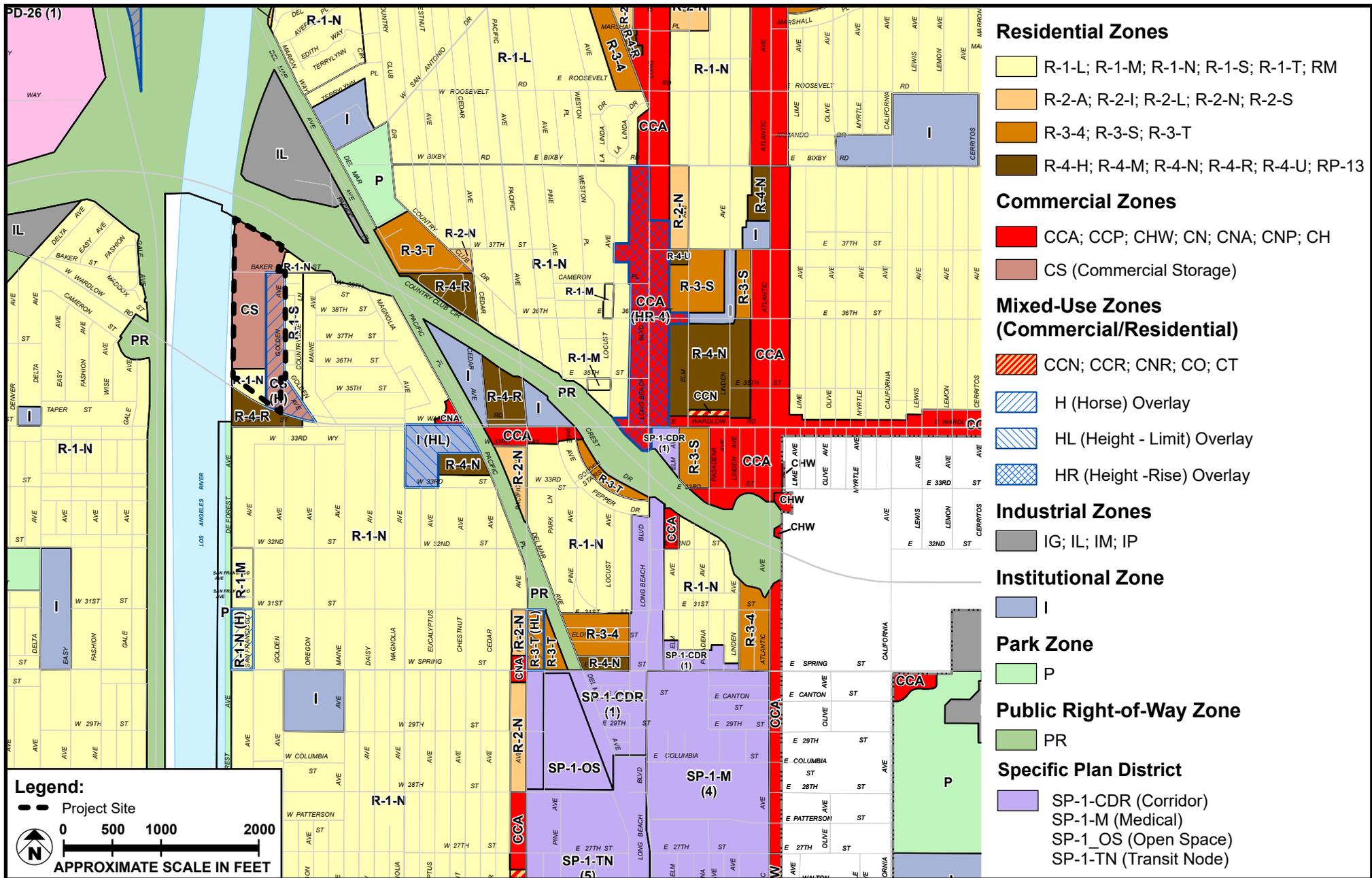
- Project Site

0 500 1000 2000  
APPROXIMATE SCALE IN FEET



SOURCE: City of Long Beach - 2021

FIGURE II.4



SOURCE: City of Long Beach - 2021

FIGURE II.5

### 3. PROJECT OBJECTIVES

Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines states that the project description shall contain “a statement of the objectives sought by the proposed project.” Section 15124(b) of the CEQA Guidelines further states that “the statement of objectives should include the underlying purpose of the project.”

The objectives of the Project are:

1. Clean up the existing hydrocarbon contamination on site, under an approved RAP by LARWQCB and under the supervision of the City’s Department of Health and Human Services.
2. Provide additional public park space in the Wrigley Heights Neighborhood.
3. Develop a range of attached and detached single-family with the Long Beach Residential development standards and LBMC to assist the City in meeting the goals for housing production identified in the Housing Element of the General Plan.
4. Provide economically viable new housing in the Wrigley Heights neighborhood that will meaningfully contribute to addressing the housing needs for the City of Long Beach and provide housing for residents working in the nearby employment centers.
5. Provide a range of recreational opportunities, including neighborhood parks, pedestrian trails, and bicycle trails segregated from vehicle traffic, which connect with supporting commercial, recreational, and other public facilities, to serve as an alternative to the automobile for surrounding residential neighborhoods and to meet the recreational needs of local residents.
6. Enhance the image of the community through visually attractive and high-quality development that is in scale, complements, and blends with the Wrigley Heights community and surrounding open space.
7. Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation, in compliance with LBMC and the Long Beach General Plan Land Use Element.

### 4. PROJECT CHARACTERISTICS

The proposed Project includes 226 detached and attached single-family units on the southern 15 acres of the 20-acre Project Site and 5 acre park on the northern portion of the site as shown in **Figure II.6: Site Plan**. Additional descriptions of these project components is provided below.

#### Residential Development Area

The Project includes 226 single-family units consisting of 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units. The proposed density is approximately 14.6 du/acre. Primary access to the residential development would be provided from a private gated street on Wardlow Road.

The residential structures adjacent to Wardlow Road are single-family condominiums with floor level garages and 2<sup>nd</sup> and 3<sup>rd</sup> story living quarters. These condominiums are also the only structures which are 3 stories in height. A total of 53 condominium structures are proposed adjacent to Wardlow Road at the south end of the residential development area.

As the interior access roadway loops north from the entrance on Wardlow Road, 25 detached single-family units are planned on the west side of the road abutting the County-owned open space bordering the Los Angeles River. These detached single-family units are 2 stories tall and would surround the perimeter of the development, 7 units to the north along Baker Street and 28 units to the east along Golden Avenue. The remaining 21 detached single-family condominium units are located towards the center of the development area along with the 99 attached 2 story townhouse units. A 54-foot long biofiltration basin is proposed between the detached single-family units and Golden Avenue.

The residential development will also include a 1 story clubhouse and pool towards the southern portion of the development, north of the 3-story condominium units. The Project would set aside approximately 4 acres for streets and parking areas within the complex, including 452 off-street garage parking spaces, and 59 guest parking spaces, 3 of which would be Americans With Disabilities (ADA) parking spaces.

For a summary of the proposed Project development areas please refer to **Table II-1: Summary of Proposed Development.**

**Table II-1  
Summary of Proposed Development**

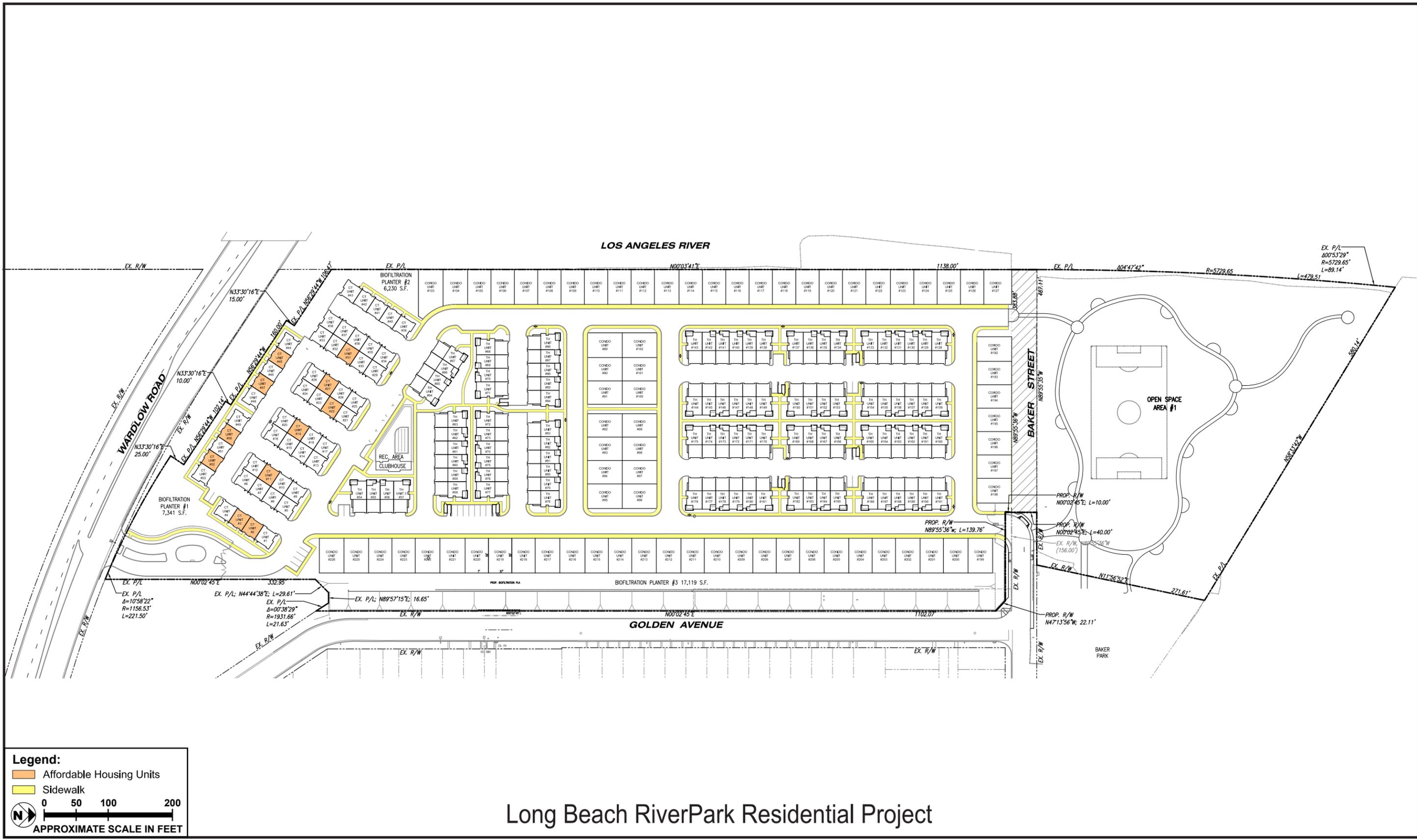
<b>Land Use</b>	<b>Area (Acres)</b>
<b>Developed Site Area</b>	<b>15.53</b>
<i>Single-Family Detached</i>	3.54
<i>Multi-Family Townhome</i>	1.02
<i>Multi-Family Attached</i>	2.68
<i>Clubhouses &amp; Recreation Area</i>	0.09
<i>Streets and Parking Areas</i>	3.94
<i>Open Space (Active) Areas</i>	0.37
<i>Open Space (Passive) Areas</i>	2.24
<i>Open Space Slope (adjacent to the I-405 freeway)</i>	0.91
<i>Biofiltration Areas</i>	0.74
<b>Park Area</b>	<b>4.81</b>
<b>Total Site Area</b>	<b>20.34</b>

## Architectural Design

Three architectural styles are proposed consisting of Spanish Colonial, Italianate, and Santa Barbara. Three versions of each style would be used to create unique styles for each home which are illustrated in **Figure II.7- II.9: Single Family Architectural Style Plans**. Seven different architectural styles are proposed for the townhomes which are presented in **Figure II.10-II.16: Townhome Architectural Style Plans**. Each design would feature unique color schemes and decorative elements which complement each other and add to the overall character of the community. All homes would be 2- to 3-stories in height, with two- to four-bedrooms, and a single ground level, two-car garage. The home sizes, including garage and courtyard and/or balcony, would range from approximately 1,500 to 2,400 sq. ft. A list of materials included for each of the building type is provided in **Table II-2: Material List By Building Type**.

**Table II-2:  
Material List By Building Type**

Multi-Family Townhomes	Multi-Family Attached	Detached Single-Family-Spanish Colonial	Detached Single-Family- Italianate	Detached Single-Family-Santa Barbara
<ul style="list-style-type: none"> <li>• Concrete 'S' Roof Tile</li> <li>• Stucco</li> <li>• 6x6 Decorative Tile Accents</li> <li>• Cementitious 'Wood' Siding</li> <li>• Stucco Trim</li> <li>• Decorative Wood Brackets</li> <li>• Decorative Shutters</li> </ul>	<ul style="list-style-type: none"> <li>• Concrete 'S' Roof Tile</li> <li>• Stucco</li> <li>• Decorative Corbels</li> <li>• Cementitious 'Wood' Siding</li> <li>• Stucco Trim</li> <li>• Decorative Wood Brackets</li> <li>• Awning Shutters</li> <li>• Wood Posts</li> <li>• Wrought Iron Railing</li> <li>• Terracotta Tile</li> </ul>	<ul style="list-style-type: none"> <li>• Concrete 'S' Roof Tile</li> <li>• 6x6 Decorative Tile Accents</li> <li>• Stucco Over Foam Trim</li> <li>• Garage Door With Glass Panels</li> <li>• Decorative Shutters</li> <li>• Tile Accent At Gable Ends</li> </ul>	<ul style="list-style-type: none"> <li>• Concrete 'S' Roof Tile</li> <li>• Decorative Shutters</li> <li>• Stucco Over Foam Trim</li> <li>• Decorative Foam Corbels</li> <li>• Garage Door With Glass At Top Panel</li> </ul>	<ul style="list-style-type: none"> <li>• Concrete 'S' Roof Tile</li> <li>• Stucco Over Foam Trim</li> <li>• Decorative Outlookers</li> <li>• Decorative Foam Corbels</li> <li>• Garage Door With Glass At Top Panel</li> <li>• Decorative Shutters</li> </ul>



SOURCE: KHR Associates - March 2021

FIGURE II.6



Site Plan

MATERIAL NOTES

- CONCRETE 'S' ROOF TILE
- 6"x6" DECORATIVE TILE ACCENT
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- GARAGE DOOR WITH GLASS AT TOP PANEL
- DECORATIVE SHUTTERS
- TILE ACCENT AT GABLE ENDS



elevationA -SPANISH COLONIAL

MATERIAL NOTES

- CONCRETE 'S' ROOF TILE
- DECORATIVE SHUTTERS
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- GARAGE DOOR WITH GLASS AT TOP PANEL



elevationB -ITALIANATE

MATERIAL NOTES

- CONCRETE 'S' ROOF TILE
- DECORATIVE OUTLOOKERS
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- GARAGE DOOR WITH GLASS AT TOP PANEL
- DECORATIVE SHUTTERS
- WOOD POSTS WITH DECORATIVE BRACKETS



elevationC -SANTA BARBARA

SOURCE: Woodley Architectural Group – March 2020

FIGURE II.7

**MATERIAL NOTES**

- CONCRETE 'S' ROOF TILE
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- GARAGE DOOR WITH GLASS AT TOP PANEL
- DECORATIVE SHUTTERS
- TILE ACCENT AT GABLE ENDS



elevationA -SPANISH COLONIAL

**MATERIAL NOTES**

- CONCRETE 'S' ROOF TILE
- DECORATIVE SHUTTERS
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- GARAGE DOOR WITH GLASS AT TOP PANEL



elevationB -ITALIANATE

**MATERIAL NOTES**

- CONCRETE 'S' ROOF TILE
- DECORATIVE OUTLOOKERS
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- GARAGE DOOR WITH GLASS AT TOP PANEL



elevationC -SANTA BARBARA

SOURCE: Woodley Architectural Group – March 2020

FIGURE II.8

MATERIAL NOTES

- CONCRETE 'S' ROOF TILE
- 6"x6" DECORATIVE TILE ACCENT
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- GARAGE DOOR WITH GLASS AT TOP PANEL
- DECORATIVE SHUTTERS
- TILE ACCENT AT GABLE ENDS



elevationA -SPANISH COLONIAL

MATERIAL NOTES

- CONCRETE 'S' ROOF TILE
- DECORATIVE SHUTTERS
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- DECORATIVE FOAM CORBELS
- GARAGE DOOR WITH GLASS AT TOP PANEL



elevationB -ITALIANATE

MATERIAL NOTES

- CONCRETE 'S' ROOF TILE
- DECORATIVE OUTLOOKERS
- STUCCO OVER FOAM TRIM AT WINDOWS AND DOORS
- DECORATIVE FOAM CORBELS
- GARAGE DOOR WITH GLASS AT TOP PANEL
- DECORATIVE SHUTTERS



elevationC -SANTA BARBARA

SOURCE: Woodley Architectural Group – March 2020

FIGURE II.9



SOURCE: Woodley Architectural Group, Inc. - March 2020

FIGURE II.10



SOURCE: Woodley Architectural Group, Inc. - March 2020

FIGURE II.11



SOURCE: Woodley Architectural Group, Inc. - March 2020

FIGURE II.12



SOURCE: Woodley Architectural Group, Inc. - March 2020

FIGURE II.13



SOURCE: Woodley Architectural Group, Inc. - March 2020

FIGURE II.14



SOURCE: Woodley Architectural Group, Inc. - March 2020

FIGURE II.15



Back-To-Back Towns 8-Unit Architectural Style



SOURCE: Woodley Architectural Group, Inc. - March 2020

FIGURE II.16

## **Public Open Space**

The portion of the Project north of Baker Street is proposed to be developed as a public park, totaling approximately 5 acres located immediately west of the City's existing Baker Street Park. The public park would be maintained by the residential Homeowners Association (HOA) but would be available to the public for use. The proposed trails within the park would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails to the east as presented in **Figure II.17: Open Space Conceptual Landscape Plan**. The looped trail within the park would provide parcourse exercise equipment, a look-out point, and a butterfly garden along the route. The center of the looped trail will include a turf area large enough to accommodate a youth soccer field. However, with no parking provided for visitors from outside the neighborhood, the park would not be programmed for recreational activities drawing from beyond the Wrigley Heights neighborhood.

## **Circulation and Access**

Two gated access points are proposed for the residential portion of the Project. Primary access would be provided from W. Wardlow Road at a signalized gated entry drive. An emergency access is proposed at the northeast corner of the complex, providing access at the intersection of Baker Street and Golden Avenue. The proposed circulation system within the complex is comprised of a looped roadway system with internal connections to each of the proposed residential housing units and parking areas within the complex.

Pedestrian access would be provided through both primary and emergency entrances. A pedestrian path off of Wardlow Road would be provided through the north side of the primary entrance and connect to pedestrian paths throughout the residential complex. The sidewalks within the residential development would connect to the open space area, creating a seamless pedestrian connection between the residential complex and the recreational open space to the north. The Applicant would dedicate and improve 10 feet for sidewalk purposes along the southern half of Baker Street as well as a 5-foot sidewalk along the western side of Golden Avenue.

The Open Space area will be accessible from the adjacent Baker Street Park and the intersection of Baker Street and Golden Avenue. Trails on site would connect to pedestrian walkways in the neighborhood, trails at Baker Street Park, and to the open space adjacent to LA River.

Vacation of the unimproved right-of-way of Baker Street west of Golden Avenue is proposed as part of the Project. This unimproved right-of-way area currently provides access for LA County maintenance vehicles to the Los Angeles River channel and their property between the project site and the Los Angeles River. Alternate access for public agency maintenance vehicles will be provided. Vehicle access to the open space area would be through Baker Street and Golden Avenue. No on-site parking facilities would be provided for the Open Space area.

## ***Landscaping***

Landscaping would be incorporated throughout the residential development area as presented in **II.18: Residential Area Conceptual Landscape Plan**. The residential development area would include approximately 4.36 acres of landscaping with approximately 375 trees planted throughout the development area. Vegetation within the condominium area would also utilize climate appropriate plants that are suitable to the southern California climate and drought tolerant. Ten different species make up the tree list for the condominium area and it includes Tipu Tree, Purple Orchid Tree, Magnolia, Marina Arbutus, Australian Wouldow, Brisbane Box, New Zealand Christmas Tree, Chanticleer Pear, Crape Myrtle, and N.C.N. (Majestic Beauty).

Landscaping in the Open Space area would utilize climate appropriate plants that are suitable to California's climate. Various shrubs and 145 trees would occupy the Open Space area. The tree species in the park area would compose of five different types of trees- California Sycamore, Chitalpa, Black Elder, Coast Live Oak, and Torrey Pine.

In combination, the residential and open space areas would provide approximately 9.17 acres of landscaped area and open space, with an estimated 520 trees planted. Any on site trees or street trees removed during construction would be replaced in accordance with the City's Tree Maintenance Policy, LBMC Chapter 14.28 pertaining to street trees, and other applicable City requirements including but not limited to Chapter 21.42 (Landscaping) of the Zoning Regulations.

In addition, the Applicant has requested vacation of excess right of way bordering Wardlow Road along the southern edge of the site in order to meet setback requirements of the City's Planned Unit Development ordinance. This area would be landscaped and the existing slope preserved.

## ***Lighting and Signage***

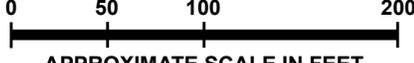
The proposed Project would include lighting throughout the residential development area and to the exterior of the development area for security, wayfinding, and entryway lighting along development access points. Additionally, decorative, and architectural lighting may be added to enhance the appearance of the site. Lighting would be provided throughout the Open Space area for security, wayfinding, and pedestrian paths safety as well. In accordance with City guidelines, on-site lighting would be shielded to reduce light levels onto off-site uses as well as prevent light aimed upwards to remain in compliance with Dark Sky requirements.

Signage would be provided throughout the residential development area, Open Space area, and along the exterior of the Project Site, as necessary. Signage may be raised and/or illuminated. All signage material, sizes, and illumination would comply with LBMC Chapter 21.44 pertaining to on-premises signs.

# LOS ANGELES RIVER



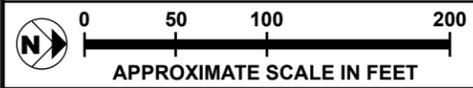
OPEN SPACE PARCEL TABULATION			
TURF AREA:	79,500 SF	1.83 AC	38%
SHRUB AREA:	113,00 SF	2.59 AC	55%
WALKWAYS:	9,000 SF	0.21 AC	4%
ACCESS ROAD:	8,000 SF	0.18 AC	3%
<b>TOTAL:</b>	<b>209,500 SF</b>	<b>4.81 AC</b>	<b>100%</b>



  
**APPROXIMATE SCALE IN FEET**

SOURCE: BGB Design Group - March 2020

FIGURE II.17

LOS ANGELES RIVER



SOURCE: BGB Design Group - March 2020

FIGURE II.18

## Vesting Tentative Tract Map

The proposed VTTM would subdivide the Project area south of Baker Street into one (1) common lot and 1 lot with 226 residential units to be constructed on the lot. This lot includes community shared amenities such as paved streets, landscaping, biofiltration areas, the club house, the pool, and the public open space area. Homeowner Association (HOA) Covenants, Conditions and Restrictions (CC&R) would provide for the maintenance of landscaping and community facilities.

## Construction

### Construction Phasing

Construction activities for the proposed project would include several phases over the span of approximately 44 months, as summarized in **Table II.3: Construction Phasing** and described below.

**Table II.3  
Construction Phasing**

Phases	Estimated Schedule	Duration
Site Clearing	October 2022	1 month
Remediation	October 2022 to June 2023	8 months
Demolition and Grading	August 2023 to December 2023	4 months
Wet and Dry Utility Installation/ Street Construction	December 2023 to July 2024	7 months
Housing Construction	August 2024 to June 2026	23 months

### Site Clearing

Site clearing would consist of clearing the existing vegetation on the site, including all trees. Various equipment including excavators, loader, and skid loaders may be used in this phase to clear site debris.

### Remediation

The ongoing remediation of the site would be completed prior to further development. This includes a bioremediation process to treat contaminated soil and subsurface material beneath the proposed residential area by altering environmental conditions to stimulate growth of microorganisms and degrade the target pollutants, which consist of total petroleum hydrocarbons (TPH). Bioremediation would be conducted and completed in accordance with the RAP as approved by the LARWCB. Treated soil would be

removed from the site and hauled to Chiquita Canyon Landfill in Castaic. Remediation would also include capping the area of the proposed park with a subsurface, engineered barrier system.

### **Demolition and Grading**

While the oil production water treatment facility was closed in 1988 and the majority of the facility was removed in 2001, remnants of this facility remain, including foundations, roads, and underground pipes. These site improvements will be removed before the site is graded for the proposed residential development. Equipment to be used during this phase may include excavators, bulldozers, loaders, crushing equipment, and water trucks for dust control. Grading would involve the moving and compaction of on-site earth materials including soil and gravel.

### **Wet and Dry Utility Installation/Street Construction**

Wet and dry utilities and streets would be constructed in this phase. Wet and dry utilities required on site include pipes for water, stormwater, and sewage, and lines for natural gas and electricity. Utilities would be routed underground as well to serve the needs of the residential development and the attached Open Space area. Any new and replaced utilities installed underground would be connected to existing municipal and regional utility providers and the wider utility infrastructure. Excavators would be used to create trenches for underground utilities to prepare the site for underground utility installation. Once the underground utilities are in place, the trenches are refilled and compacted to ensure stability. Utility installation is anticipated to span approximately eight months.

Paving and installation of the streets would take place after grading and underground utility installation. After the streets are paved, signage, curbs, roadway markings, and speed bumps would be installed.

### **Housing Construction**

The final phase would consist of construction of the proposed housing. This phase of construction is anticipated to take approximately three years.

### **Construction Lighting**

Lighting within and on the exterior of the Project Site would be provided during construction for on-site security and pedestrian safety purposes. Any construction lighting on site would be temporary in nature and removed post construction. In accordance with City guidelines, on-site lighting would be shielded to reduce light levels onto off-site uses as well as prevent light aimed upwards to remain in compliance with Dark Sky requirements.

### **Construction Signage**

Construction signage would be posted along the Project Site and may be raised and/or illuminated. Any construction signage posted would be temporary in nature and removed post construction. All signage material, sizes, and illumination would comply with LBMC Chapter 21.44 pertaining to on-premises signs. Any illumination of signage would be in accordance with City guidelines, including the implementation of shielding and preventing light aimed upwards to remain in compliance with Dark Sky requirements.

### **Construction Hours**

Construction hours would be limited based on the adherence to Sections 8.80.202A through 80.202C of the LBMC. LBMC prohibits construction work between the hours of 7:00 p.m. and 7:00 a.m. on weekdays and Federal holidays, between the hours of 7:00 p.m. on Friday and 9:00 a.m. on Saturday and after 6:00 p.m. on Saturday, and any time on Sunday. Due to these restrictions lighting on the Project Site would be limited to short durations prior to 7:00 p.m. from Monday to Friday and prior to 6:00 p.m. on Saturdays during winter months, if needed.

## **5. INTENDED USES OF THIS EIR**

This Draft EIR will serve as the primary source of environmental information for the actions and approvals associated with the development of the Project. The intended uses of this Draft EIR include compliance with CEQA and to provide information needed by the City Planning Commission, City Council, and other City departments to make decisions regarding Project approvals and conditions. This Draft EIR is also intended to support all federal, State, and regional and/or local government discretionary approvals that may be required to develop the Project.

### **Discretionary Approvals**

The City, acting as Lead Agency, will consider approval of the following actions:

1. Zone Change from CS and R-1-N to RP-15 (Residential Planned Unit Development at 15 du/ac).
2. Vesting Tentative Tract Map
3. Vacation of the unimproved right-of-way for Baker Street west of Golden Avenue
4. Site Plan Review (Planning Commission level)
5. Development Agreement
6. General Plan Conformance for the vacation of right of way

Responsible Agencies may include, but are not limited to, the following:

1. Los Angeles Regional Water Quality Control Board, for approval of the RAP.

### III. ENVIRONMENTAL SETTING

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Section 15125 of the CEQA Guidelines requires an EIR to include a description of the physical environmental conditions at the time the Notice of Preparation is published, and states this environmental setting normally constitutes the baseline physical condition used to determine if an impact is significant.

#### 1. LOCATION

The City of Long Beach occupies the southernmost portion of Los Angeles County. The City is bordered by the cities of Carson and Los Angeles to the west, Paramount and Lakewood to the north, and Los Alamitos and Seal Beach to the east. The City also surrounds the City of Signal Hill on all sides in its central area. The Pacific Ocean abuts the City's southern border.

The Project Site is associated with the address of 701 and 712 W Baker Street as well as 3501, 3539, 3701, and 3801 Golden Avenue in Long Beach. The Project Site is located near the western edge of the City of Long Beach, south of the San Diego (I-405) Freeway and east of the Long Beach Freeway (I-710) and Los Angeles River. The Project Site is bounded by W. Wardlow Road on the south, Golden Avenue on the east, I-405 to the north, and County-owned open space bordering the Los Angeles River (LA River) to the west. Regional access is provided by both the I-405 and I-710 Freeways. West of the Project Site, Wardlow Road is connected to the I-710 north onramp and I-710 south offramp.

#### 2. EXISTING SITE CONDITIONS

The Project Site is vacant with the edges fenced off with a mix of chain link fences, wooden fences, and hedges. Access to the Project Site is currently secured by chain link fence gates and padlocks. Previous uses, described below have been abandoned and removed though some old foundations, roads, and pipes are still present on the site. Non-native tree species, notably eucalyptus species, Peruvian and Brazilian Pepper, and California and Canary Island Palm Trees are present on the Site. Native plant species of blue elderberry, mulefat, whiteflowered nightshade, saltwort, and telegraph weed, were also observed. Elevations on the Site range from 20 to 40 feet, with a general down slope toward the west and three excavated depressions in the center of the Site.

For over 50 years during the 20<sup>th</sup> century, the Project Site was used for the treatment of oil field production brines and other fluid by-products generated during oil production activities. This process occurred in settling excavated basins and also in concrete-walled skimming basins with associated pumps, above ground storage tanks (ASTs), and associated structures. This operation was terminated and for the past 20 years remediation of residual oil on the site has been ongoing, with oversight by the City of Long Beach and the State of California Los Angeles Regional Water Quality Control Board.

### 3. SURROUNDINGS LAND USES

The Project site is bounded by I-405 on the north, Golden Avenue on the east, the Los Angeles River on the west and Wardlow Road on the south. Land uses surrounding the Project site are mostly residential or roadway and river. To the east are detached single-family condominium units and single-family detached homes in the Wrigley Heights neighborhood. The west is the channelized LA River bordered by a County-owned open space corridor. To the north is the 405 freeway beyond which is vacant industrial land and the Los Cerritos residential neighborhood. To the south of Wardlow Road is the North Wrigley residential neighborhood.

The existing neighborhood Baker Street park at Baker Street & Golden Avenue is located adjacent to the northeast corner of the Project. There also a public dog park on the north side of Wardlow Road, adjacent to the southeast corner of the Project Site.

The Project is located immediately east of the LA River, which provides a walking path adjacent to the eastern edge of the river for which there is a pedestrian entrance at the northwestern corner of De Forest Avenue and West 34th Street, located south of Wardlow Road. There is also an existing, unpaved, informal pedestrian path connecting the end of Baker Street with the LA River walking path.

Regional access to the site is provided by Interstate 405 (I-405) and Interstate 710 (I-710). Local access to the site is provided by Wardlow Road and Magnolia Avenue.

Long Beach Transit (LBT) and LA Metro provide public transit services in the vicinity of the proposed Project site. There is a bus stop at the corner of Magnolia Avenue and Wardlow Road and a Metro rail station is located at Wardlow Road and Pacific Place.

### 3. APPLICABLE REGIONAL AND LOCAL PLANS

#### **Southern California Association of Governments (SCAG)**

SCAG is the authorized regional agency for intergovernmental review of programs proposed for federal financial assistance and direct development activities. SCAG consists of local governments from six counties including Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial counties. These six counties encompasses 191 cities in the region. SCAG is also responsible for the designated Regional Transportation Plan (RTP), including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. The 2020-2045 RTP/SCS, also known as Connect SoCal, was adopted by SCAG on September 3, 2020. The 2020–2045 RTP/SCS is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern.

Update of the 2020-2045 RTP/SCS reflects changes in economic, policy, and demographic conditions in the region.<sup>1</sup> In the SCAG region, annual growth is slowing down in concert with the national population growth trend. It is anticipated that population growth in the region will slow down from about 0.85 percent in 2020 to about 0.45 percent by 2045. These changes are driven by declines in fertility and affected by high housing costs in the region. The population in the region is also growing older, with a median age of 32.3 in 2000 to 35.8 in 2016. By 2045, the median age is expected to reach 39.7. Net migration to the region has also slowed over the last 30 years.

In terms of housing, new housing production within the SCAG region has accelerated since the recession with over 40,000 new units permitted each year from 2015 to 2018. This is an increase above the 15,000 annual permits after the 2008 recession but still below the average of 80,000 new units permitted annually during the housing boom from 2002 to 2006.

### **Long Beach General Plan**

The Project Site is designated Land Use District (LUD) No. 20, Founding and Contemporary Neighborhood (FCN) PlaceType in the City's 2040 General Plan. The FCN PlaceType allows single-family residential, two-family residential, mobile homes, institutional, and park uses, as well as public right-of-way. Planned developments are also allowed. The Land Use Element and the Urban Design Element of the General Plan include design guidelines and standards to encourage new developments with appropriate scale and massing in relation to its neighborhood context.<sup>2</sup>

### **Zoning Code**

The Project Site is zoned for Commercial Storage (CS) and Single-Family Residential Standard Lot (R-1-N) use, with the properties along Golden Avenue situated within the Horse Overlay District (H). The Horse Overlay District was established to form uniform regulations, safeguards and controls for keeping and maintaining horses within the City. The overlay district must be used in conjunction with an underlying use district. The CS zone serves as the underlying district at the Project location and is intended to permit storage uses in areas which are particularly difficult to use due to parcel shape, access, adverse environmental conditions, or in areas where parcels are needed to form a buffer from incompatible uses.<sup>3</sup>

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1 Southern California Association of Governments (SCAG), 2020-2045 Connect SoCal [2020 RTP/SCS] (adopted November 2019).

2 City of Long Beach. 2016 Land Use Element and Urban Design Element.  
<https://www.longbeach.gov/lbds/planning/initiatives--programs/long-beach-2040-general-plan/>.

3 City of Long Beach. Long Beach Municipal Code. Title 21- Zoning. Chapter 21.32- Commercial Districts.  
[https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.32CODI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.32CODI). Accessed March 25, 2020.

#### 4. RELATED PROJECTS

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed where they are significant. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great a level of detail as that necessary for the project alone. Section 15355 of the Guidelines defines cumulative impacts as "...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts represent the change caused by the incremental impact of a project when added to other proposed or committed projects in the vicinity.

The CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from either a list of past, present and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; a summary of projections contained in an adopted General Plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impact analyses in this DEIR use a combined Method A and B. Generally, the growth projections that are identified in the current Long Beach General Plan (and other long-range planning documents where necessary, such as SCAG's RTP/SCS) have been utilized.

Some impacts are site specific; however, several of the environmental topic areas consider a larger area to determine cumulative impacts, such as air quality, greenhouse gas emissions, hydrology and water quality, noise, and transportation. The cumulative study area, methodology, and impacts for each environmental impact category are discussed separately under each environmental topic in this DEIR.

In coordination with the City, two proposed development projects were identified for inclusion in the opening year analysis. A four-story, mixed-use 35,000 square-foot office building is planned for 3435 Long Beach Boulevard, east of the Project. Additionally, the proposed self-storage and RV storage facility at 3701 Pacific Place. This related project will construct a 150,000-gross-squarefoot building with 1,100 self-storage units and 580 RV storage spaces on the currently vacant property.

## IV. ENVIRONMENTAL ANALYSIS

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In accordance with Section 15126 of the State CEQA Guidelines, this section provides an analysis of the direct and indirect environmental effects, as well as cumulative environmental effects, of the Project. The determination of whether an impact is significant has been made based on the physical conditions established at the time the NOP was published (CEQA Guidelines, Section 15125[a]).

The following environmental resources are assessed in this Section:

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

Each topical section contains a discussion of the environmental setting, regulatory framework, and potential impacts associated with the Project.

If potential significant impacts are identified, feasible mitigation measures are recommended. The analysis also includes a level of impact after the implementation of mitigation measures.

### 1. INTRODUCTION

This section of the Draft EIR provides a discussion of the visual character of the Project Site and surrounding area and applicable laws and regulations associated with aesthetics, as well as an analysis of the potential effects resulting from implementation of the proposed Project.

### 2. ENVIRONMENTAL SETTING

#### *Existing Conditions*

##### **Visual Character of the Project Site Vicinity**

The Project Site is located within the neighborhood of Wrigley Heights near the western edge of the City of Long Beach. The Project Site is bordered by Interstate 405 (I-405) to the north, Golden Avenue to the east, Wardlow Road to the south, and Los Angeles River to the west. The surrounding area is characterized by a mix of residential development, open space, the Los Angeles River, and freeways. **Figure IV.A-1: Existing Land Use Within 500 feet** shows the surrounding land uses within 500 feet of the Project Site.

The Los Angeles River Trail along the west side of the Project site is a recreational trail available to pedestrians, bicyclists, and horses. West of the Los Angeles River is Interstate 710 (I-710) and additional residential development.

Two parks—Baker Street Park and Wrigley Heights Dog Park—are adjacent on the east side of the Project Site. Baker Street Park lies to the north of the Project Site and includes amenities such as a playground, concrete picnic tables and benches, and a walking path. The landscaping around the park includes native and drought-tolerant plants. The Wrigley Heights Dog Park is located south of the Project Site and includes an entry/vestibule area for unleashing or holding dogs when entering and leaving the park, trash receptacles, benches, and a water fountain. Few existing trees provide shade within and around the park and the ground consists of only mulch and no native plant species. A masonry wall lines the east side of the dog park adjacent to Golden Avenue and chain link fencing is situated around the additional perimeter of the park adjacent to Wardlow Avenue to the south and the Project Site to the west.

Across Golden Avenue east of the Project Site are one-story and two-story homes. Sidewalks exist east of the Project Site, immediately adjacent to the two-story residential homes and follow Golden Avenue up to Countryside Lane to the south and up to Baker Street to the north. Additional pedestrian walkways line the roads within the residential area to the east. Baker Street, Golden Avenue, and the roadways within the existing neighborhood consist of two lane streets with one-lane going in each direction. Countryside Lane adjacent to Golden Avenue contains one-way streets.

An existing traffic light is situated within the intersection of West Wardlow Road and Magnolia Avenue. Golden Avenue is connected to Magnolia Avenue to the west. Lighting within the area is provided by streetlights along Golden Avenue and within the existing Wrigley Heights neighborhood along the pedestrian walkways.

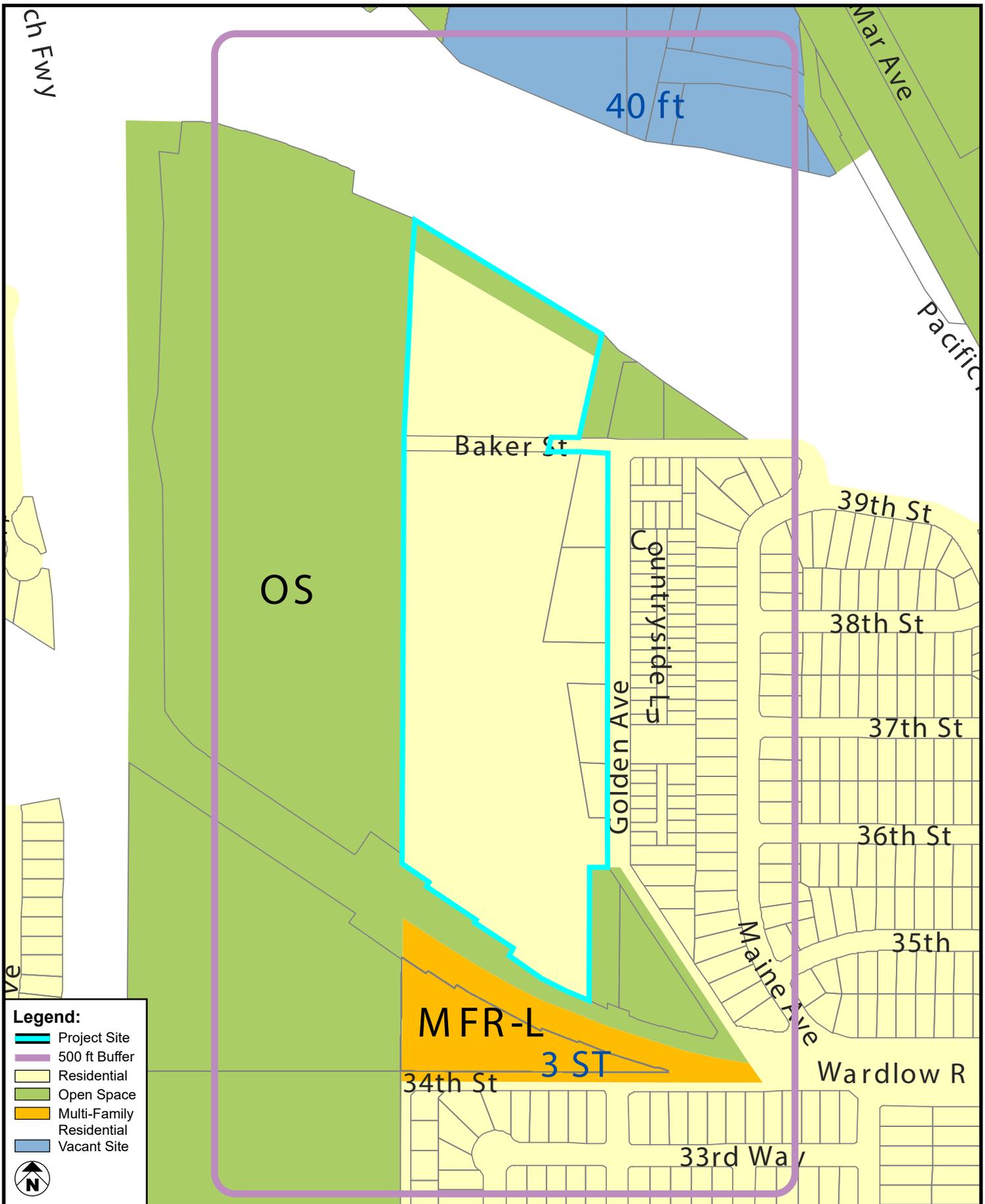
### **Visual Character of the Project Site**

The Project Site is currently vacant and fenced with a mix of chain link fences, wooden fences, and hedges. Access to the Project Site is secured by chain link fence gates adjacent to Wardlow Road and Golden Avenue. The Project Site is currently only accessible through a gated, partially paved road connected to Baker Street and intersecting Golden Avenue. Baker Street Park, located to the northeast of the Project Site, includes a chain link fencing around the portion of the park which overlaps with the Project Site. Immediately upon entering through the gated access point to the west is a large concrete slab where the water treatment facility was located. This foundation includes chain link fencing around the perimeter and a chain link gate at the entrance. Continuing down the partially paved road, powerlines exist along the north parcel of the Project Site to the east of the entrance road. There are no paved roads within the existing Project Site and a gravel pathway lies adjacent to the Los Angeles River on the western portion of the Project Site.

The visual character of the Project Site is characterized by its vacant state, with portions of the Site being occupied by remnants of the water treatment facility, limited vegetation, bare dirt, a scattering of nonnative mature trees, and elevations on the property ranging from 20 to 40 feet. Refer to **Section IV.C: Biological Resources** for more information on vegetation within the Project Site. The vacant site contains remnants of the water treatment facility which was removed in 2000 and 2001. Existing infrastructure from the previous facility includes building foundations, roads, and underground pipes. The Project Site also contains two water treatment basins which presents themselves as large flat areas.

### ***Existing Views***

A viewshed is a geographic area composed of land, water, biotic, and/or cultural elements (i.e., visual resources) that may be seen from one or more viewpoints and has inherent scenic qualities and/or aesthetics value as determined by those who view it. The extent of a viewshed can be limited by a number of intervening elements, including trees and other vegetation, built structures, or topography such as hills and mountains. **Figure IV.A-2: Viewpoint Map Key** identifies the location of five existing viewpoints on and around the Project Site that were selected for analysis of the change in the visual character of surrounding area that would result from the Project. These viewpoints showcase the existing short-range views of the surrounding area, so that the visual character of the area can be addressed.



SOURCE: Google Earth - 2021

FIGURE IV.A-1

Viewpoint 1 – Looking south along Golden Avenue



SOURCE: City of Long Beach - 2021

FIGURE IV.A-3

Viewpoint 2 – Looking east along Baker Street



SOURCE: City of Long Beach - 2021

FIGURE IV.A-4



Viewpoint 2

Viewpoint 3 – Looking west along extension of Baker Street



SOURCE: City of Long Beach - 2021

FIGURE IV.A-5

Viewpoint 4 – Looking north east from Wardlow Road



SOURCE: City of Long Beach - 2021

FIGURE IV.A-6

Viewpoint 5 – Looking north from pedestrian/bike path along the Los Angeles River



SOURCE: City of Long Beach - 2021

FIGURE IV.A-7

### View 1

Viewpoint 1, shown in **Figure IV.A-3**, depicts a southern view of the existing Golden Avenue roadway from about 173 feet south of the restricted entrance to the Project Site on Baker Street. This vantage point is representative of the existing view of motorists, bicyclists, or pedestrians traveling south down Golden Avenue. As shown in this figure, existing two-story residential development is located to the west of the roadway and the Project Site is on the east. There is parking located along both sides of Golden Avenue with an existing sidewalk to the east of the residences. There is no existing public infrastructure such as sidewalks or shade trees located to the west of the Project Site. Only a portion of a hedge can be seen shielding the Project Site from the roadway. Powerlines can be seen lining the sidewalk adjacent to the existing homes to the west of Golden Avenue.

### View 2

Viewpoint 2, shown in **Figure IV.A-4**, depicts an easterly view of the existing Baker Street from the restricted entrance of the Project Site. This vantage point is representative of the existing view visible to a motorist, bicyclist, or pedestrian traveling east from the Project Site down Baker Street. As shown in this figure, Baker Street Park is located to the west of Baker Street and the existing two-story residential development is to the east. Baker Street Park provides a single handicapped parking space pictured in the figure adjacent to the park west of Baker Street. The park also includes a medium-sized grass area for recreational activities. Pedestrian access is provided by sidewalks to the west of the existing residences including shade trees. Continuing power lines exist to the east of the park and follow Baker Street north from this viewpoint.

### View 3

Viewpoint 3, shown in **Figure IV.A-5**, depicts a westerly view of the existing partially paved road that is an extension of Baker Street within the restricted entrance of the Project Site. This vantage point is representative of the existing view of motorists, bicyclists, or pedestrians traveling west down Baker Street and past the gated entrance to the Project Site. As shown in this figure, some nonnative trees dot the Site and existing powerlines run along the existing roadway. There are chain link fences lining the perimeter of both sides of Baker Street. There is a staircase seen directly northeast from the Baker Street entrance where the Los Angeles River Trail entrance is located.

#### **View 4**

View 4, shown in **Figure IV.A-6**, depicts a northeastern view of the Project Site from the pedestrian accessway along Wardlow Road. This vantage point is representative of the existing view of pedestrians traveling west along the trail adjacent to Wardlow Road and motorists traveling along Wardlow Road going west. As shown in the figure, there is chain link fencing between the pathway on the west and the Project Site on the east. The trail leads to the perimeter of the Project Site on the east and the Los Angeles River to the west. The existing residential development can be seen further to the east past the Project Site. The Los Angeles River is located across the pathway to the west.

#### **View 5**

View 5, shown in **Figure IV.A-7**, depicts a northern view of the Los Angeles River, bicycle lanes and pedestrian pathway to the immediate east of the river and the Project Site to the far east. This vantage point is representative of the existing view of motorists traveling west along the Wardlow Road. As shown in the figure, there is an existing bicycle roadway and pedestrian pathway that travel along the eastern side of the Los Angeles River. In the distance to the north, the I-405 is situated above the Los Angeles River and the I-710 is located adjacent to the river to the west.

### **3. REGULATORY SETTING**

#### ***State***

##### **State Scenic Highways**

The California Scenic Highway Program is maintained by the California Department of Transportation (Caltrans) and identifies scenic highway corridors for preservation and protection of aesthetic value. Caltrans maintains a list of routes that are “adopted” and “eligible.” A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler’s enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. Eligible routes are those that are proposed for further study and may be officially designated when a local jurisdiction adopts a scenic corridor protection program and applies to Caltrans for scenic highway approval.

#### ***Local***

##### **City of Long Beach General Plan**

The City of Long Beach General Plan includes policies within multiple elements that focus on protecting views of the City’s natural resources and other important scenic features.

### **Conservation Element**

**Goal 2:** To create and maintain a productive harmony between man and his environment through conservation of natural resources and protection of significant areas having environmental and aesthetic value. (pg. 8)

### **Open Space and Recreation Element**

**Policy 1-2:** Protect and improve the community's natural resources, amenities and scenic values including nature centers, beaches, bluff, wetlands, and water bodies. (pg. 17)

### **Urban Design Element**

**UD Policy 19-3:** Support new development that is designed to respect the height, massing and open space characteristics of the existing neighborhood while creating the appearance of single-family units for multifamily buildings to allow for better integration.

**UD Policy 19-5:** Provide shade trees to match the existing species to reinforce neighborhood identity, to add greenscape for texture, shade, and overall visual character, and to create a uniform streetscape. Maintain consistent wall and fence treatment along the street edge.

**UD Policy 29-3:** Integrate learning components at natural feature sites to connect people with natural environment and support a collective pride in stewardship of local natural areas.

### **Long Beach Municipal Code**

The Long Beach Municipal Code (LBMC) Zoning Regulations (Title 21), in conformance with the General Plan land use designations, regulates land use development within the City, including permitted uses, building setbacks, heights, parking, design standards and other criteria. It is important to note that these Code requirements are implemented in accordance with other, often competing but yet important City and State policies and laws related to housing. Thus, as discussed in the Project Description and Land Use section of this EIR, the State Legislature has made it the policy of the State to mandate the relief from some of the policies below where, as here, the Project proposes to produce much needed affordable housing.

**Section 21.40.220 Lower Height Limits—Building Height.** Development shall not exceed the building height restrictions indicated on the zoning map.

**Section 21.41.259 Parking Areas—Lighting.** All parking lots and garages are required to be illuminated with lights directed and shielded to prevent light and glare from intruding onto adjacent sites. The light standards shall not exceed the height of the principal use structure or 1 foot for each 2 feet of distance between the light standard and the nearest property line, whichever is greater.

**Section 21.42.020 Landscaping Required—General Requirements.** All required yards and setback areas shall be attractively landscaped primarily with drought tolerant and native plant materials. Decorative nonliving materials such as brick, stone, art, fountains, and ponds may be used within the landscaped area provided such materials present an attractive setting consistent with the intent of these landscaping requirements. All landscape areas shall be completely planted or covered. "Landscape area" means all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, walkways, driveways, parking lots, decks, patios, and other non-irrigated areas designated for nondevelopment (e.g., open spaces and existing native vegetation).

**Section 21.44.855 Light and Glare Intrusion Prevention.** All electronic message center signs shall be adequately shielded and properly oriented and aimed as to prevent the intrusion of light and glare upon residential land uses, including those in mixed-use districts.

**Section 21.44.600 (E) (3) Prohibited Signs, Unlawful Illumination.** Floodlights that are not hooded or shielded so that the light source is not visible from public right-of-way, adjacent property, or residential dwelling unit are prohibited.

## 4. ENVIRONMENTAL IMPACTS

### *Thresholds of Significance*

To assist in determining whether the Project would have a significant effect on the environment, the City finds the Project may be deemed to have a significant impact related to aesthetics if it would:

**Threshold AES-1:**        **In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

## 5. METHODOLOGY

The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. The analysis identifies potential

temporary impacts from the proposed construction and operational effects of the Project on aesthetic resources, as seen from publicly accessible roads, bike trails, and other sensitive observer points. Based on photographic documentation, as well as the Project's physical aspects in light of the proposed site plan, landscape plan, building elevations, and other Project design information, the analysis compares existing conditions to future conditions. The figures and photos are utilized in this impact analysis to characterize how the visual environment and aesthetic conditions would change with implementation of the Project.

## 6. PROJECT IMPACTS

**Threshold AES-1:**        **In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

### ***Construction***

The Project Site is currently vacant and most of the Site is regularly tilled due to bioremediation activities. There is an existing concrete pad on the eastern portion of the Project Site associated with the former water treatment facility on-site. Additionally, remnants of the water treatment plant such as roads and underground pipes still exist and would need to be removed prior to grading. On-site construction would commence over a period of three to four years. The staging of construction equipment and materials is anticipated to occur primarily on-site which would temporarily alter the visual appearance of the Project Site. The transition from a disturbed vacant site to graded areas, construction of utilities, and construction of finished buildings with landscaped areas would occur in phases over the entire Project Site. As such, aesthetics of the Project Site would be altered during construction of the proposed Project.

Construction phases would include site clearing, bioremediation, removal of existing infrastructure and grading, constructing wet and dry utilities, and then finally construction of the buildings. Bioremediation would be conducted and completed prior to construction in accordance with a finalized Remedial Action Plan (RAP) approved by the LARWCB. Bioremediation activities are already occurring on site; therefore, continued bioremediation activities would not alter existing views of the Site. Equipment to be used during construction would include excavators, wheel loaders, skid-steer loaders, and a water truck for dust control. Best management practices during construction would be implemented including watering of the Project Site which would be used to reduce wind erosion and control dust during grading. Use of visual screening surrounding the perimeter of the Project Site would also be erected to reduce unfavorable views of the Site. Construction screening would be provided for the perimeter of the Project Site that is viewed from Wardlow Road (Viewpoint 4), the pedestrian/bicycle path along the L.A. River (Viewpoint 5), and the view from Golden Avenue (Viewpoint 1). Since construction staging is anticipated to take place on site,

views of the staging area would be similarly shielded by perimeter wind screens for the duration of the construction period.

Lighting during the construction period would be placed within and on along the exterior of the Site and would be available during night-time for on-site security and pedestrian safety purposes. Any construction lighting on-site would be temporary in nature and removed post construction. In accordance with the LBMC, on-site lighting would be shielded to reduce light levels onto off-site uses as well as prevent light aimed upwards to remain in compliance with Dark Sky requirements.<sup>1</sup>

Construction visual impacts are temporary in nature. Implementation of best management practices including erecting wind screens, a water truck, and providing lighting consistent with LBMC would reduce visual construction impacts to less than significant.

### **Operation**

Once the Project is completed, the view of the Site would be altered from its existing condition. The Site is currently vacant except for the remnants of the former water treatment infrastructure, chain link fencing around the perimeter, and limited vegetation including nonnative tall trees. Current views from the two-story homes located to the east of Golden Avenue adjacent to the southern end of the Project Site include Wardlow Road, the Wrigley Heights Dog Park, and a portion of the Los Angeles River as well as the Los Angeles River Trail.

During operation, the Project Site would include three-story, attached, single-family units in the form of Carriage Townhomes, which would be located on the southern portion of the Project Site adjacent to Wardlow Road. These homes adjacent to Wardlow Road would be single-family condominiums with floor level garages and second and third story living quarters. A total of 53 condominium structures are proposed adjacent to Wardlow Road at the south end of the residential development area. These condominiums would be the only three-story buildings on the Site. The main entrance to the development would come from Wardlow Road on the south side of the Project Site. The road would loop north to travel adjacent to 25 detached single-family units are planned on the west side of the road abutting the Los Angeles River. These detached single-family units are two-stories tall and would surround the perimeter of the development, 7 units to the north along Baker Street and 28 units to the east along Golden Avenue. The remaining 21 detached single-family condominium units are located towards the center of the development area along with the 99 attached two-story townhouse units. A 54-foot long biofiltration basin and a privacy wall is proposed between the detached single-family units and Golden Avenue.

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1 Long Beach Municipal Code, Section 21.41.259, Parking Areas and Lighting.

The residential development would also include a one-story clubhouse and pool towards the southern portion of the development, north of the condominium units along Wardlow Road. The proposed Project would set aside approximately 4 acres for streets and parking areas within the complex and approximately 5 acres for public Open Space. See **Section II: Project Description, Figure 2.6** for a visual representation of the Project Site layout.

According to the City's General Plan Land Use Element, structures at the Project Site are limited to a height of 2-stories.<sup>2</sup> The proposed Project qualifies for a housing density bonus through the addition of low-income housing that would be included in the Project development. As stated in the LBMC Section 21.63.080<sup>3</sup> and the California Density Bonus Law, State of California Government Code Section 65915,<sup>4</sup> one (1) standard shall be waived if the Applicant can demonstrate that the increased density cannot physically be accommodated on the Site. The proposed density for the Project is approximately 14.6 dwelling units (DU)/acre. As shown by **Figure IV.A-8: Land Use Density by Place Type**, the Residential Density for the FCN PlaceType, which includes the Project Site and surrounding residential developments, is 7-18 du/acre. The Project is within the density range consistent with the PlaceType and surrounding development requirements.

The completed Project would include a total of 226 homes, 53 of which would be three-stories in height and the remaining would be two- stories. While this would constitute a visual change from the existing conditions, the character would be consistent with the surrounding area and the three-story homes would be concentrated near the southern portion of the Project Site adjacent to Wardlow Road. This would create less influence on the existing views looking west from the existing Wrigley Heights neighborhood since the location of these three-story structures would be offset from the view on Golden Avenue and from the viewpoint of residential homes east of the Project Site.

As the ground level within the Project site is lower the neighborhood to the east, the proposed building heights would be consistent with the existing one- and two-story single-family homes in the surrounding area. In addition, access to views along the Los Angeles River from the Project Site as well as the park space located to the north of the Project, are within the design of the Project. An extension would be created from Baker Street leading to a pedestrian pathway that connects to the Los Angeles River, allowing for public access to the bike/pedestrian path that follows the river. Access to the LA River trails would also be provided through the park space pathway connections.

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- 2 City of Long Beach General Plan, *Land Use Element*, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/lueude/land-use-element-final-adopted-december-2019>, accessed April 2021.
  - 3 LBMC, Ch. 21, Section 21.63.080, Waiver of Development Standards.
  - 4 Government Code, Title 7 Planning and Land Use, Ch 4.3 Density Bonuses and other Incentives, Section 65915.

PlaceType		Uses		Density/Intensity/Height			
		Uses Allowed	Mix of Uses	Residential Density	Nonresidential Intensity (FAR)	Maximum Height <sup>A</sup>	
Open Space		Parks, beaches, golf courses, marinas, flood control channels and basins, rivers, utility rights-of-way, oil islands, inland bodies of water, nature preserves, marine habitats, estuaries, wetlands, lagoons; Limited commercial recreation uses that supplement recreation services and complement existing programming and facilities		No	N/A	See Open Space and Recreation Element	2 stories
Neighborhoods	Founding and Contemporary Neighborhood	Single-family and low-density housing; Neighborhood-serving low-intensity commercial uses		Yes	7-18 du/ac	0.25 to 0.50	2 stories; varies by area <sup>B</sup>
	Multi-Family	Low	Duplex, triplex and garden apartment housing; Neighborhood-serving, low-intensity commercial uses	Yes	Up to 29 du/ac based on lot size	0.25 to 0.50	4 stories
		Moderate	Moderate-density apartment and condominium buildings on larger parcels of land; Neighborhood-serving, low-intensity commercial uses	Yes	Up to 62 du/ac based on lot size	0.50 to 0.75	6 stories
Mixed-Use	Neighborhood-Serving Centers and Corridors	Low	Neighborhood-serving, low-intensity commercial uses; Low-density apartment and condominium buildings	Yes	Up to 44 du/ac based on lot size	0.50 to 1.00	4 stories
		Moderate	Neighborhood-serving, moderate-intensity commercial uses; Moderate-density apartment and condominium buildings on larger parcels of land	Yes	Up to 54 du/ac based on lot size	1.00 to 1.50	7 stories
	Transit-Oriented Development	Low	Low urban density apartment and condominium buildings; Low-intensity commercial uses	Yes	N/A	1.50 to 3.00	5 stories
		Moderate	Moderate urban density apartment and condominium buildings; Moderate-intensity commercial uses	Yes	N/A	2.00 to 4.00	10 stories
Employment	Community Commercial	Commercial and office uses that serve community-based needs for goods and services		No	N/A	2.00 to 4.00	7 stories
	Industrial	Research and development activities, storage, industrial and manufacturing endeavors, tank farms, oil drilling and the like; Limited commercial uses accessory to the industrial business		No	N/A	N/A	65 ft.
	Neo-Industrial	Light industrial, clean manufacturing and offices; Commercial uses accessory to creative business endeavor(s); Repurposed buildings with live/work artist studios <sup>C</sup>		Yes	Up to 36 du/ac based on lot size	0.50 to 1.00	65 ft.
Unique	Regional-Serving Facility	Medical centers, higher education campuses, Port of Long Beach, Long Beach Airport and surrounding areas, public utility facilities (e.g., water, energy), destination retail centers and similar uses		Yes	See Map LU-8 (PlaceType Height Limits)		
	Downtown	See Downtown Plan		Yes	See Downtown Plan		
	Waterfront	Varies by area; see descriptions		Yes	Varies by area; see descriptions		

SOURCE: City of Long Beach General Plan Land Use Element - 2019

FIGURE IV.A-8

The Project would include similar low-density residential housing as seen by the existing neighborhood and would reference existing development to create compatible architectural design of the proposed homes. Refer to **Section 2: Project Description, Figures 2.7-2.16** for the proposed Architectural Style Plan of the residential development. The proposed Project include Spanish Colonial, Italianate, and Santa Barbara architectural styles which complement the character of the Project vicinity. Overall, with the proposed architectural design and building elements, the Project would be consistent with the existing character of the community.

According to Long Beach Municipal Code Section 21.41.259 Parking Areas—Lighting, all parking lots and garages are required to be illuminated with lights directed and shielded to prevent light and glare from intruding onto adjacent sites.<sup>5</sup> The lighting standards shall not exceed the height of the principal use structure or 1 foot for each 2 feet of distance between the light standard and the nearest property line, whichever is greater. The proposed Project would include lighting throughout the residential development and to the exterior of the development area for security, wayfinding, and entryway lighting along development access points.

Additionally, decorative and architectural lighting may be added to enhance the appearance of the Site, but all on-site lighting would be shielded to reduce light levels onto off-site uses as well as to prevent light aimed upwards to remain in compliance with Dark Sky requirements. Lighting would be provided throughout the Open Space area for security, wayfinding, and pedestrian paths safety as well.

Signage would be provided throughout the residential development area, Open Space area, and along the exterior of the Project Site as necessary, including raised and/or illuminated signs. All signs found throughout the development and Open Space area would adhere to Section 21.44.855 Light and Glare Intrusion Prevention<sup>6</sup> which states that all electronic message center signs shall be adequately shielded and oriented to prevent intrusion of light and glare to off-site uses.

The proposed Project would also be consistent with Section 21.44.600 (E) (3) Prohibited Signs, Unlawful Illumination<sup>7</sup> of the LBMC. All signage material, sizes, and illumination would comply with LBMC requirements. Compliance with the existing municipal code would reduce the visual impacts of the proposed Project on the surrounding area through light and glare.

Although the visual character of the Project Site would be altered from its current condition during construction, the impacts associated with construction would be less than significant due to the progressive and temporary nature of grading and other construction activities and the implementation of BMPs. During operation, the proposed Project would be located adjacent to a developed residential

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5 LBMC, Ch. 21, Section 21.41.259, Parking Areas—Lighting.

6 LBMC, Ch. 21, Section 21.44.855, Light and Glare Intrusion Prevention.

7 LBMC, Ch. 21, Section 21.44.600 (E), Prohibited Signs—Unlawful Illumination.

neighborhood. There would be development of multiple three-story structures within the Project Site which would be situated on the south end of the Project Site adjacent to Wardlow Road. However, the three-story buildings are consistent with the waiver requested by the proposed Project by including affordable housing units. Furthermore, with the three-story structures concentrated towards the southern portion of the Site, where views are further removed from the existing residential neighborhood east of Golden Avenue, the view of these three-story buildings would be negligible from the viewpoints available from existing residents. The rest of the proposed Project structures are consistent in height with the rest of the existing neighborhood and operational views would not differ significantly from the existing view within the Wrigley Heights' neighborhood. Overall, changes to the Project Site at buildout would depict a cohesive development and contribute to the community's overall character. Impacts associated with conflicts with existing zoning and regulations regarding visual characteristics would be less than significant.

## **7. CUMULATIVE IMPACTS**

A cumulative analysis for aesthetic resources evaluates whether impacts of the proposed Project and related projects, when taken as a whole, would have a significant environmental impact on aesthetic resources. The geographic area for cumulative analysis of aesthetic resources is the City of Long Beach. The City resides in an urban setting which is mostly built out with new developments occurring primarily as in-fill development, such as the proposed Project. As previously stated, the existing view on site is relatively flat vacant land with primarily nonnative vegetation. Existing view to the Site is also obstructed by existing wooden and chain linked fences along Golden Avenue.

As previously mentioned, operational views of the Project Site would be consistent with the view of the adjacent neighborhood which is primarily low-rise residential. The Project Site would include primarily low-rise residential structures similar in character to the existing neighborhood. Since no significant visual resources are identified near or on the Project Site, the proposed Project would not contribute to the obstruction or elimination of significant viewshed or aesthetic resources nearby or within the viewpoint of those positioned near the Project Site in an additive sense. The proposed Project would also be consistent in terms of density and height with existing regulations and zoning and would not contribute to inconsistency of building types and density with existing regulations and zoning in an additive sense. For these reasons, the proposed Project would not contribute to cumulative impacts to aesthetic resources.

## **8. MITIGATION MEASURES**

The proposed Project would have a less than significant impact on aesthetic resources. Therefore, no mitigation measures would be required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed Project would have a less than significant impact on aesthetic resources. Therefore, no mitigation measures would be required.

### 1. INTRODUCTION

This section of the Draft EIR evaluates the potential effects of the air emissions that would be generated by construction and operation of the proposed Project. The analysis also addresses consistency of the proposed Project with the air quality policies set forth within the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP) and the City of Long Beach (City) General Plan. The analysis of air emissions generated by the Project focuses on whether the proposed Project would cause an exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are included in **Appendix IV.B.1: CalEEMod Air Quality Emission Output Files** and **IV.B.2: Health Risk Assessment Report** of this Draft EIR.

### 2. ENVIRONMENTAL SETTING

#### Air Quality Background

The proposed Project is located within the South Coast Air Basin (Air Basin), an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The Air Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

Air pollutant emissions within the Air Basin are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources occur at an identified location and are usually associated with manufacturing and industry. Examples of point sources are boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products, such as barbeque lighter fluid and hair spray. Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircrafts, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural

environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

The U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) designate air basins where air pollution levels exceed the State or federal ambient air quality standards (AAQS) as “nonattainment” areas. These pollutants are referred to as “criteria air pollutants” as a result of the specific standards, or criteria, which have been adopted for them. The federal and State standards have been set at levels considered safe to protect public health, including the health of “sensitive” populations, such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, an area is considered “unclassified.” Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Transportation conformity for nonattainment and maintenance areas is required under the federal Clean Air Act (CAA) to ensure federally supported highway and transit projects conform to the State Implementation Plan (SIP). The USEPA approved California’s SIP revisions for attainment of the 1997 8-hour ozone (O<sub>3</sub>) National AAQS for the Basin in October 2019.

Ambient air pollution can cause public health concerns and can contribute to increases in respiratory illness and death rates. Air pollution can affect the health of both adults and children. The adverse health effects associated with air pollution are diverse and include cardiovascular effects, premature mortality, respiratory effects, cancer, reproductive effects, neurological effects, and other health outcomes.<sup>1</sup>

### ***Criteria Air Pollutants and Health Effects***

The criteria air pollutants that are most relevant to current air quality planning and regulation in the Air Basin include, ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). In addition, volatile organic compounds (VOC) and toxics air contaminants (TACs) are a concern in the Air Basin but are not classified under AAQS.

The State and federal AAQS and their attainment status in the Basin for each of the criteria pollutants are summarized in **Table IV.B-1: Ambient Air Quality Standards and Attainment Status**. Under the federal standards, the Basin is currently designated as nonattainment for the O<sub>3</sub>, Pb, and PM<sub>2.5</sub> thresholds. Under

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1 South Coast Air Quality Management District (SCAQMD), 2016 Air Quality Management Plan, Appendix I: Health Effects (March 2017), <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-i.pdf?sfvrsn=14>. Accessed April 2021.

the State standards the Basin is currently designated as nonattainment for the O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> thresholds.

**Table IV.B-1  
Ambient Air Quality Standards and Attainment Status**

Pollutant	Averaging Period	California		Federal	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O <sub>3</sub> )	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	Nonattainment	—	Nonattainment
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )		0.070 ppm (137 µg/m <sup>3</sup> )	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic mean	0.03 ppm (57 µg/m <sup>3</sup> )	Attainment	0.053 ppm (100 µg/m <sup>3</sup> )	Unclassified/ Attainment
	1-hour	0.18 ppm (339 µg/m <sup>3</sup> )		0.100 ppm (188 µg/m <sup>3</sup> )	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m <sup>3</sup> )	Attainment	9 ppm (10 mg/m <sup>3</sup> )	Unclassified/ Attainment
	1 hour	20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> )	
Sulfur Dioxide (SO <sub>2</sub> )	1 hour	0.25 ppm	Attainment	0.075 ppm	Attainment
	24 hours	0.04 ppm		—	
Lead (Pb)	30-day average	1.5 µg/m <sup>3</sup>	Attainment	—	Nonattainment
	Rolling 3-month average	—		0.15 µg/m <sup>3</sup>	
Respirable Particulate Matter (PM <sub>10</sub> )	24 hours	50 µg/m <sup>3</sup>	Nonattainment	150 µg/m <sup>3</sup>	Attainment
	Annual arithmetic mean	20 µg/m <sup>3</sup>		—	
Fine Particulate Matter (PM <sub>2.5</sub> )	24 hours	—	Nonattainment	35 µg/m <sup>3</sup>	Nonattainment
	Annual arithmetic mean	12 µg/m <sup>3</sup>		12 µg/m <sup>3</sup>	

Source: California Air Resources Board (CARB), Area Designations Maps/State and National, <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed April 2021.

Note: ppm = parts per million; µg = micrometer; m<sup>3</sup> = cubic meter; mg = milligram.

Elevated concentrations of certain air pollutants in the atmosphere have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants. In the United States, such pollutants have been identified and are regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the USEPA and are subject to emissions control requirements adopted by

federal, State, and local regulatory agencies. These pollutants are referred to as “criteria air pollutants” as a result of the specific standards, or criteria, which have been adopted pertaining to them.

The EPA established the National Ambient Air Quality Standards (NAAQS) to “provide public health protection, including protecting the health of ‘sensitive’ populations such as asthmatics, children, and the elderly,” allowing “an adequate margin of safety.” California Ambient Air Quality Standards (CAAQS) were “established to protect the health of the most sensitive groups in our communities” and “defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment.”<sup>2</sup> The characteristics of each criteria pollutant and their health effects are briefly described below.

### **Ozone (O<sub>3</sub>)**

O<sub>3</sub> is a highly reactive and unstable gas that is formed when reactive organic gases (ROGs), sometimes referred to as VOCs, and NO<sub>x</sub>, byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O<sub>3</sub> concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

According to USEPA, O<sub>3</sub> can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath. O<sub>3</sub> can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases such as asthma, emphysema and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease.<sup>3</sup>

Long-term exposure to O<sub>3</sub> is linked to aggravation of asthma and is likely to be one of many causes of asthma development. Long-term exposures to higher concentrations of O<sub>3</sub> may also be linked to permanent lung damage, such as abnormal lung development in children.<sup>4</sup> According to CARB, inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a

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2 California Air Resources Board (CARB), California Ambient Air Quality Standards, <https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards>. Accessed April 2021.

3 US Environmental Protection Agency (USEPA), Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed April 2021.

4 USEPA, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed April 2021.

variety of symptoms, and exposure to O<sub>3</sub> can reduce the volume of air that the lungs breathe in and cause shortness of breath.<sup>5</sup>

USEPA states that people most at risk from breathing air containing O<sub>3</sub> include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.<sup>6</sup> Children are at greatest risk from exposure to O<sub>3</sub> because their lungs are still developing and they are more likely to be active outdoors when O<sub>3</sub> levels are high, which increases their exposure.<sup>7</sup> According to CARB, studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to O<sub>3</sub> and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults.<sup>8</sup> Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults.

### **Carbon Monoxide (CO)**

CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Air Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

According to the USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death.<sup>9</sup> Very high levels of CO are not likely to occur outdoors; however, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease since these people already have a reduced ability for getting oxygenated blood to their hearts and are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations,

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5 USEPA, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed April 2021.

6 USEPA, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed April 2021.

7 USEPA, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed April 2021.

8 USEPA, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed April 2021.

9 USEPA, Carbon Monoxide (CO) Pollution in Outdoor Air, <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution>. Accessed April 2021.

short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina.

According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain.<sup>10</sup> For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress; inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO.

### **Nitrogen Dioxide (NO<sub>2</sub>) and Nitrogen Oxides (NO<sub>x</sub>)**

NO<sub>2</sub> is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO), similar to O<sub>3</sub>. NO<sub>2</sub> is also a byproduct of fuel combustion. NO and NO<sub>2</sub> are collectively referred to as NO<sub>x</sub> and are major contributors to O<sub>3</sub> formation. NO<sub>2</sub> also contributes to the formation of PM<sub>10</sub>. High concentrations of NO<sub>2</sub> can cause breathing difficulties and there is some indication of a relationship between NO<sub>2</sub> and chronic pulmonary fibrosis. Some increase of bronchitis in children (2-3 years old) has been observed at concentrations below 0.3 ppm.

According to the USEPA, short-term exposures to NO<sub>2</sub> can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms. Longer exposures to elevated concentrations of NO<sub>2</sub> may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. According to CARB, controlled human exposure studies that show that NO<sub>2</sub> exposure can intensify responses to allergens in allergic asthmatics.<sup>11</sup>

In addition, a number of epidemiological studies have demonstrated associations between NO<sub>2</sub> exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses.<sup>12</sup> Infants and children are particularly at risk from exposure to NO<sub>2</sub> because they have disproportionately higher exposure to NO<sub>2</sub> than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration while in adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease.

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10 CARB, Carbon Monoxide & Health, <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>. Accessed April 2021.

11 CARB, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed April 2021.

12 CARB, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed April 2021.

CARB states that much of the information on distribution in air, human exposure and dose, and health effects is specifically for NO<sub>2</sub> and there is only limited information for NO and NO<sub>x</sub>, as well as large uncertainty in relating health effects to NO or NO<sub>x</sub> exposure.<sup>13</sup>

### **Particulate Matter (PM<sub>10</sub>) and Fine Particulate Matter (PM<sub>2.5</sub>)**

Particulate Matter (PM) consists of small liquid and solid particles floating in the air, including smoke, soot, dust, salts, acids, and metals and can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Sources of PM<sub>10</sub> emissions include dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, and wind-blown dust from open lands.<sup>14</sup> Sources of PM<sub>2.5</sub> emissions include combustion of gasoline, oil, diesel fuel, or wood. PM<sub>10</sub> and PM<sub>2.5</sub> may be either directly emitted from sources (primary particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO<sub>2</sub>, NO<sub>x</sub>, and certain organic compounds.

A consistent correlation between elevated ambient respirable and fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks, and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life span, and an increased mortality from lung cancer.

According to CARB, both PM<sub>10</sub> and PM<sub>2.5</sub> can be inhaled, with some depositing throughout the airways; PM<sub>10</sub> is more likely to deposit on the surfaces of the larger airways of the upper region of the lung, while PM<sub>2.5</sub> is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage, and lung inflammation.<sup>15</sup> Short-term (up to 24 hours duration) exposure to PM<sub>10</sub> has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits. The effects of long-term (months or years) exposure to PM<sub>10</sub> are less clear, although studies suggest a link between long-term PM<sub>10</sub> exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer.

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13 CARB, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed April 2021.

14 CARB, Inhalable Particulate Matter and Health (PM<sub>2.5</sub> and PM<sub>10</sub>), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed April 2021.

15 CARB, Inhalable Particulate Matter and Health (PM<sub>2.5</sub> and PM<sub>10</sub>), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed April 2021.

Short-term exposure to PM<sub>2.5</sub> has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. Long-term exposure to PM<sub>2.5</sub> has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.<sup>16</sup> According to CARB, populations most likely to experience adverse health effects with exposure to PM<sub>10</sub> and PM<sub>2.5</sub> include older adults with chronic heart or lung disease, children, and asthmatics. Children and infants are more susceptible to harm from inhaling pollutants such as PM<sub>10</sub> and PM<sub>2.5</sub> compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems.

### **Sulfur Dioxide (SO<sub>2</sub>) and Sulfur Oxides (SO<sub>x</sub>)**

Sulfur Dioxide (SO<sub>2</sub>) is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, as well as from chemical processes occurring at chemical plants and refineries. When SO<sub>2</sub> oxidizes in the atmosphere, it forms sulfates (SO<sub>4</sub>). Collectively, these pollutants are referred to as sulfur oxides (SO<sub>x</sub>).

According to the USEPA, short-term exposures to SO<sub>2</sub> can harm the human respiratory system and make breathing difficult.<sup>17</sup> According to CARB, health effects at levels near the State one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity and exposure at elevated levels of SO<sub>2</sub> (above 1 parts per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.<sup>18</sup> Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO<sub>2</sub>.<sup>19,20</sup>

### **Lead (Pb)**

Lead (Pb) occurs in the atmosphere as particulate matter and is also considered a TAC. The combustion of leaded gasoline is the primary source of airborne lead in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so the majority of such combustion emissions are associated with off-road vehicles. However, because leaded gasoline was emitted in large amounts from vehicles when leaded gasoline was used for on-road motor vehicles, Pb is present in many urban soils and can be

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16 CARB, Inhalable Particulate Matter and Health (PM<sub>2.5</sub> and PM<sub>10</sub>), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed April 2021.

17 USEPA, Sulfur Dioxide (SO<sub>2</sub>) Pollution, <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics>. Accessed April 2021.

18 CARB, Sulfur Dioxide & Health, <https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health>. Accessed April 2021.

19 CARB, Sulfur Dioxide & Health, <https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health>. Accessed April 2021.

20 USEPA, Sulfur Dioxide (SO<sub>2</sub>) Pollution, <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics>. Accessed April 2021.

resuspended in the air. Other sources of Pb include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and the use of secondary Pb smelters.

Pb can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system, and affects the oxygen carrying capacity of blood. The Pb effects most commonly encountered in current populations are neurological effects in children, such as behavioral problems and reduced intelligence, anemia, and liver or kidney damage.<sup>21</sup> Excessive Pb exposure in adults can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain.

While the SCAQMD CEQA Air Quality Handbook contains numerical indicators of significance for Pb, project construction and operation would not include sources of Pb emissions and would not exceed the numerical indicators for Pb. Unleaded fuel and unleaded paints have virtually eliminated Pb emissions from commercial land use projects.

### ***Volatile Organic Compounds (VOCs)***

VOCs include any compound of carbon, excluding CO, CO<sub>2</sub>, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. VOC emissions often result from the evaporation of solvents in architectural coatings. Reactive organic gases are any reactive compounds of carbon, excluding methane, CO, CO<sub>2</sub>, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. ROG emissions are generated from the exhaust of mobile sources.<sup>22</sup> Both VOCs and ROGs are precursors to ozone and the terms can be used interchangeably.<sup>23</sup>

### ***Toxic Air Contaminants (TACs)***

Toxic Air Contaminants (TACs) or hazardous air pollutants (HAPs), are defined by the USEPA as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. For consistency within this document, they will be referred to as TACs. TACs are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects. TACs are emitted by a variety of industrial processes such as petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. TACs may exist as PM<sub>10</sub> and PM<sub>2.5</sub> or as vapors (gases). TACs

21 CARB, Lead & Health, <https://ww2.arb.ca.gov/resources/lead-and-health>. Accessed April 2021.

22 SCAQMD, Appendix A: Calculation Details for CalEEMod (October 2017), [http://www.aqmd.gov/docs/default-source/caleemod/02\\_appendix-a2016-3-2.pdf?sfvrsn=6](http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6). Accessed April 2021.

23 Both VOC and ROGs are precursors to ozone so they are summed in the CalEEMod report under the header ROG. For the purposes of comparing the ROG value to a VOC significance threshold, the terms can be used interchangeably.

include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources. The emission of a TAC does not automatically create a health hazard. Other factors, such as the amount of the TAC, its toxicity, how it is released into the air, the weather, and the terrain, all influence whether the emission could be hazardous to human health. Emissions of TACs into the air can be damaging to human health and to the environment. Human exposure to TACs at sufficient concentrations and durations can result in cancer, poisoning, and rapid onset of sickness, such as nausea or difficulty in breathing. Other less measurable effects include immunological, neurological, reproductive, developmental, and respiratory problems. TACs deposited onto soil or into lakes and streams affect ecological systems and eventually human health through consumption of contaminated food. The carcinogenic potential of TACs is a particular public health concern because many scientists currently believe that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen poses some risk of contracting cancer.<sup>24</sup>

The public's exposure to TACs is a significant public health issue in California. The Air Toxics "Hotspots" Information and Assessment Act is a State law requiring facilities to report emissions of TACs to air districts.<sup>25</sup> The program is designed to quantify the amounts of potential TACs released, the location of the release, the concentrations to which the public is exposed, and the resulting health risks. The Air Toxics "Hotspots" Program (AB 2588) identified over 200 TACs, including the 188 TACs identified in the CAA.<sup>26</sup>

The USEPA has assessed this expansive list and identified 21 TACs as Mobile Source Air Toxics (MSATs).<sup>27</sup> MSATs are compounds emitted from highway vehicles and nonroad equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. USEPA also extracted a subset of these 21 MSAT compounds that it now labels as the nine priority MSATs: 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (DPM)/diesel exhaust organic gases, ethylbenzene, naphthalene, and polycyclic organic matter (POM). While these nine MSATs are considered the priority transportation toxics, USEPA stresses that the lists are subject to change and may be adjusted in future rules.<sup>28</sup>

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24 USEPA, Hazardous Air Pollutants, <https://www.epa.gov/haps>. Accessed April 2021.

25 CARB, General Information About "Hot Spots." <https://www.arb.ca.gov/ab2588/general.htm>. Accessed April 2021.

26 CARB, AB 25188 Air Toxics "Hot Spots" Program. <https://www.arb.ca.gov/ab2588/ab2588.htm>. Accessed April 2021.

27 US Environmental Protection Agency, Air Toxics Risk Assessment Reference Library, Volume 1 Technical Resource Manual. April 2004.

28 US Department of Transportation Federal Highway Administration, Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents.

## ***Diesel Exhaust***

According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from the exhaust of diesel-fueled engines (i.e., DPM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances).

Diesel exhaust is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of many of the urban TACs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine diesel particulates are of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals, and other trace elements. Diesel exhaust is emitted from a broad range of diesel engines; the on-road diesel engines of trucks, buses and cars and the off-road diesel engines that include locomotives, marine vessels and heavy-duty equipment. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

The most common exposure to DPM is breathing air that contains diesel exhaust. The fine and ultra-fine particles are respirable (similar to  $PM_{2.5}$ ), which means that they can avoid many of the human respiratory system defense mechanisms and enter deeply into the lungs. Exposure to DPM comes from both on-road and off-road engine exhaust that is either directly emitted from the engines or lingering in the atmosphere.

Diesel exhaust causes health effects from long-term chronic exposures. The type and severity of health effects depends upon several factors including the amount of chemical exposure and the duration of exposure. Individuals also react differently to different levels of exposure. There is limited information on exposure to only DPM, but there is enough evidence to indicate that inhalation exposure to diesel exhaust causes chronic health effects as well as having cancer-causing potential.

Because it is part of  $PM_{2.5}$ , DPM also contributes to the same noncancer health effects as  $PM_{2.5}$  exposure. These effects include premature death, hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new

allergies. Those most vulnerable to noncancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.<sup>29</sup>

### ***Gasoline Exhaust***

Similar to diesel exhaust, gasoline is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of the same TACs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine diesel particulates are of the greatest health concern and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements. Gasoline exhaust is primarily emitted from light-duty passenger vehicles. The compounds in the gas and particles phases can cause health effects from short- and long-term exposures similar to those described under the TAC and particulate matter discussions above.

### ***Visibility Reducing Particles***

Visibility-reducing particles are any particles in the atmosphere that obstruct the range of visibility by creating haze.<sup>30</sup> These particles vary in shape, size and chemical composition, and come from a variety of natural and manmade sources including windblown metals, soil, dust, salt, and soot. Other haze-causing particles are formed in the air from gaseous pollutant (e.g., sulfates, nitrates, organic carbon particles) which are the major constituents of fine PM, such as PM<sub>2.5</sub> and PM<sub>10</sub>, and are caused from the combustion of fuel. CARB's standard for visibility reducing particles is not based on health effects, but rather on welfare effects, such as reduced visibility and damage to materials, plants, forests, and ecosystems. The health impacts associated with PM<sub>2.5</sub> and PM<sub>10</sub> are discussed above under Particulate Matter.

## **Existing Air Quality Conditions**

### ***Regional Air Quality***

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Air Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography affect the

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29 CARB, Overview: Diesel Exhaust & Health, <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>. Accessed April 2021.

30 CARB, Visibility Reducing Particles and Health, <https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health>. Accessed April 2021.

accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential.

The greatest air pollution throughout the Air Basin occurs from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. O<sub>3</sub> concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in Southern California. However, as discussed earlier, the Air Basin fails to meet the national standards for O<sub>3</sub> and PM<sub>2.5</sub> as well as the State standards for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

California Health and Safety Code section 39607(e) requires CARB to establish and periodically review area designation criteria. **Table IV.B-2: South Coast Air Basin Attainment Status (Los Angeles County)** provides a summary of the attainment status of the Los Angeles County portion of the Air Basin with respect to the federal and State standards.

**Table IV.B-2  
South Coast Air Basin Attainment Status (Los Angeles County)**

Pollutant	Federal Standards	California Standards
O <sup>3</sup> (1-hour standard)	N/A <sup>a</sup>	Nonattainment
O <sup>3</sup> (8-hour standard)	Nonattainment – Extreme	Nonattainment
CO	Attainment	Attainment
NO <sub>2</sub>	Attainment	Attainment
SO <sub>2</sub>	Attainment	Attainment
PM <sub>10</sub>	Attainment	Nonattainment
PM <sub>2.5</sub>	Nonattainment	Nonattainment
Lead	Nonattainment <sup>b</sup>	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified

*Notes:*

*N/A = not applicable*

<sup>a</sup> *The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.*

<sup>b</sup> *Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.*

*Source: CARB, Area Designation Maps / State and National, <http://www.arb.ca.gov/design/adm/adm.htm>. Accessed April 2021.*

As shown, the Air Basin is designated under federal or State ambient air quality standards as nonattainment for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Emissions of O<sub>3</sub>, NO<sub>x</sub>, VOC, and CO have been decreasing in the Air Basin since 1975 and are projected to continue to decrease through 2031 (22) (23). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled (VMT) in the Air Basin continue to increase, NO<sub>x</sub> and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO<sub>x</sub> emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. O<sub>3</sub> contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1980 and 2019. For 2019, there was an overall decrease in exceedance days compared with the 1980 period. However, as shown in **Figure IV.B-1: O<sub>3</sub> Trends in the Air Basin**, O<sub>3</sub> levels have increased in the past three years due to higher temperatures and stagnant weather conditions. Notwithstanding, O<sub>3</sub> levels in the Air Basin have decreased substantially over the last 30 years with the current maximum measured concentrations being approximately one-third of concentrations within the late 70's (24).

As with other pollutants, the most recent PM<sub>10</sub> statistics show an overall improvement as shown in **Figure IV.B-2: PM<sub>10</sub> Trends in the Air Basin**. During the period for which data are available, the 24-hour national annual average concentration for PM<sub>10</sub> decreased by approximately 46%, from 103.7 microgram per cubic meter (µg/m<sup>3</sup>) in 1988 to 55.5 µg/m<sup>3</sup> in 2020 (25). Although the values are below the federal standard, it should be noted that there are days within the year where the concentrations would exceed the threshold. The 24-hour state annual average for emissions for PM<sub>10</sub>, have decreased by approximately 64 percent, from 93.9 µg/m<sup>3</sup> in 1989 to 33.9 µg/m<sup>3</sup> in 2020 (25). Although data in the late 1990's show some variability, this is probably due to the advances in meteorological science rather than a change in emissions. Similar to the ambient concentrations, the calculated number of days above the 24-hour PM<sub>10</sub> standards has also shown an overall drop. **Figure IV.B-3: PM<sub>2.5</sub> Trends in the Air Basin** shows the most recent PM<sub>2.5</sub> concentrations in the Air Basin from 1999 through 2020. Overall, the national and state average concentrations have decreased by almost 50 percent and 31 percent respectively (25). It should be noted that the Air Basin is currently designated as nonattainment for the State and federal PM<sub>2.5</sub> standards.

The most recent CO concentrations in the Air Basin are shown in **Figure IV.B-4: CO Trends in the Air Basin** (25). CO concentrations in the Air Basin have a total decrease of about 69 percent in the peak 8-hour concentration from 2000 to 2020. The number of exceedance days has also declined. The entire Air Basin is now designated as attainment for both the State and national CO standards. Ongoing reductions from motor vehicle control programs should continue the downward trend in ambient CO concentrations.

The most recent NO<sub>2</sub> data for the Air Basin is shown in **Figure IV.B-5: NO<sub>2</sub> Trends in the Air Basin** (25). Over the last 50 years, NO<sub>2</sub> values have decreased significantly; the peak 1-hour national and State averages for 2020 is between 75 percent and 80 percent lower than they were during 1963. The Air Basin

attained the State 1-hour NO<sub>2</sub> standard in 1994, bringing the entire State into attainment. NO<sub>2</sub> is formed from NO<sub>x</sub> emissions, which also contribute to O<sub>3</sub>. As a result, the majority of the future emission control measures would be implemented as part of the overall O<sub>3</sub> control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's NO<sub>x</sub> emissions. These measures are expected to bring the SCAQMD into attainment of the State annual average standard.

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary products, and consumer products. According to the *Ambient and Emission Trends of Toxic Air Contaminants in California* journal article (30) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

CARB introduced two programs that aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase "Check Engine" or "Service Engine Soon". The system will also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. CARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 pounds (lbs). CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990 to 2012. 1,3-Butadiene concentrations also declined 85% from 1990 to 2012 as a result of the use of reformulated gasoline and motor vehicle regulations (30).

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (<15 ppm) diesel fuel. As a result of these measures, DPM concentrations have declined 68 percent since 2000, even though the State's population increased 31 percent and the amount of diesel vehicle miles traveled increased 81 percent, as shown in **Figure IV.B-6: DPM and Diesel Vehicle Miles Trend**. With the implementation of these diesel-related control regulations, CARB expects a DPM decline of 71 percent for the period from 2000 to 2020. SCAQMD's Multiple Air Toxics Exposure Study (MATES) study, discussed later illustrates the cancer risk trends, which show an

approximate 80 percent reduction in risk from 2000 to 2020, which correlates to the reductions in DPM anticipated by CARB.

Based on information available from CARB, overall cancer risk throughout the Air Basin has declined since 1990. In 1998, following an exhaustive 10-year scientific assessment process, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant.

SCAQMD has prepared an Air Basin-wide air toxics study, the Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-V).<sup>31</sup> MATES V field measurements were conducted at ten fixed sites (the same sites selected for MATES III and IV) to assess trends in air toxics levels. MATES V also included measurements of ultrafine particles (UFP) and black carbon (BC) concentrations, which can be compared to the UFP levels measured in MATES IV (31). In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by taking into account multiple exposure pathways, which includes inhalation and non-inhalation pathways. This approach is consistent with how cancer risks are estimated in SCAQMD's programs such as permitting, Air Toxics Hot Spots (AB 2588), and CEQA. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic non-cancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic non-cancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazard Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time (32). **Figure IV.B-7: Average Cancer Risk Trends at MATES Monitoring Sites** illustrates cancer trends from MATES II through V at each monitoring station. As shown, cancer risks have decreased including at the two Long Beach monitoring stations.

As part of the MATES-V Study, SCAQMD prepared a series of maps that shows regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The estimates provided in these maps represent the cancer risk per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years) in parts of the area. The MATES-V map is the most recently available map to represent existing conditions near the Project area. Based on the Mates-V map, the Project Site is located within a cancer risk zone of approximately 615 in one million.<sup>32</sup> The cancer risk in this area is predominantly related to nearby sources of diesel particulate

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31 SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES V) Final Report, <https://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report-9-24-21.pdf?sfvrsn=6>. Accessed December 2021.

32 SCAQMD, MATES V Data Visualization Tool, [https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/Main-Page/?data\\_id=dataSource\\_105-a5ba9580e3aa43508a793fac819a5a4d%3A162&views=Click-tabs-for-other-data%2CCancer-Risk](https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/Main-Page/?data_id=dataSource_105-a5ba9580e3aa43508a793fac819a5a4d%3A162&views=Click-tabs-for-other-data%2CCancer-Risk). Accessed December 2021.

(e.g., Interstates 405 and 710). The risk at the Project Site is comparable with other urbanized areas in the Long Beach area that are near diesel sources (e.g., freeways, airports, and ports).

## Local Air Quality

### Existing Pollutant Levels at Nearby Monitoring Stations

The SCAQMD has divided its jurisdictional territory of the Basin into 38 source receptor areas (SRAs), most of which have monitoring stations that collect air quality data. These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. These geographical areas include urbanized regions, interior valleys, coastal areas, and mountains.

The Project Site is within SRA 4, South Coastal Los Angeles County.<sup>33</sup> The nearest air monitoring station SCAQMD operates is located at 2425 Webster Street, Long Beach.<sup>34</sup> This station monitors O<sub>3</sub>, CO, NO<sub>2</sub> and SO<sub>2</sub>. A monitoring station at 1305 E. Pacific Coast Highway, Long Beach measures Lead, PM<sub>2.5</sub> and PM<sub>10</sub>.<sup>35</sup> **Table IV.B-3: Air Quality Monitoring Summary** summarizes published monitoring data from 2017 through 2019, the most recent 3-year period available. The data shows that during the past few years, the has PM<sub>10</sub> standards have been exceeded in SRA 4.

### Surrounding Uses

The Project Site is located near the western edge of the City of Long Beach, east of and adjacent to the Los Angeles River (LA River). The San Diego (I-405) Freeway is located approximately 85 feet north of the Project Site. The Long Beach Freeway (I-710) is located approximately 660 feet to the west of the Project Site. The Project Site is also bounded by W. Wardlow Road to the south and Golden Avenue to the east.

To the east of the Project Site are detached single-family condominium units and single-family detached homes in the Wrigley Heights neighborhood. To the south and west of the channelized LA River are condominium communities that transition into single-family homes. Pedestrian and bike trails are provided adjacent to the LA River. Vacant land is located north of I-405 and east of the LA River. There are two public parks adjacent to the Project Site. Baker Street Park is located north of the intersection of Golden Ave and Baker Street. The Wrigley Heights Dog Park is located to the southeast corner of the Project Site at the intersection of W. Wardlow Road and west of Golden Avenue.

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33 SCAQMD, General Forecast Areas and Air Monitoring Areas, map, <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>. Accessed April 2021.

34 SCAQMD, Quality Assurance Site Survey Report for Long Beach (Hudson), AQS ID 060374006, <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/aaqmpn-hudson.pdf?sfvrsn=29>. Accessed April 2021.

35 <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/aaqmpn-longbeachsouth.pdf?sfvrsn=16>. Accessed October 2021.

**Table IV.B-3  
Air Quality Monitoring Summary**

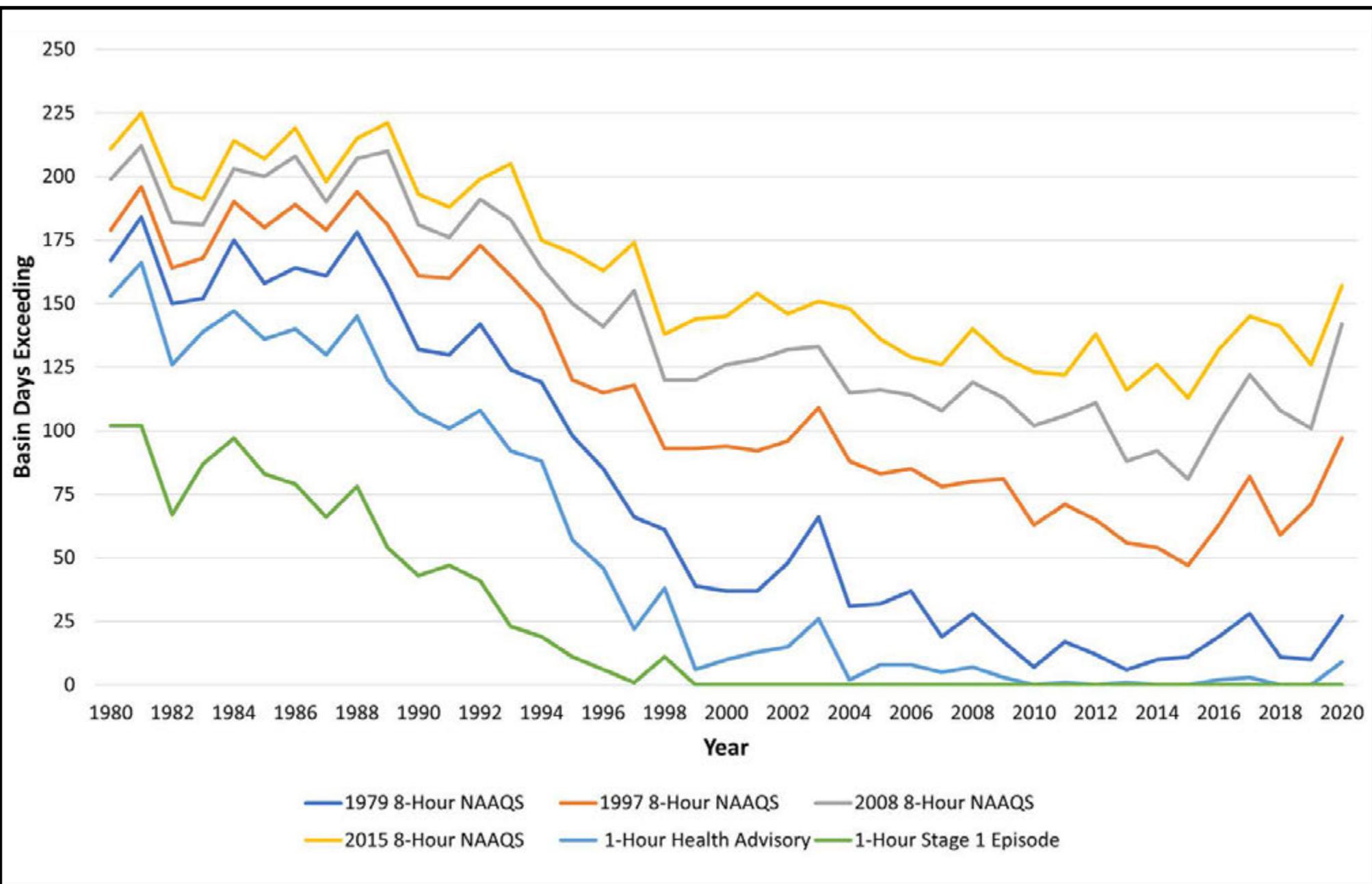
Air Pollutant	Average Time (Units)	2017	2018	2019
Ozone (O <sub>3</sub> )	State Max 1 hour (ppm)	0.082	0.074	0.075
	Days > CAAQS threshold (0.09 ppm)	0	0	0
	National Max 8 hour (ppm)	0.068	0.063	0.064
	Days > NAAQS threshold (0.07 ppm)	0	0	0
	State Max 8 hour (ppm)	0.069	0.064	0.065
	Days > CAAQS threshold (0.07 ppm)	0	0	0
Carbon monoxide (CO)				
Nitrogen dioxide (NO <sub>2</sub> )	National Max 1 hour (ppm)	0.090	0.085	0.072
	Days > NAAQS threshold (0.100 ppm)	0	0	0
	State Max 1 hour (ppm)	0.089	0.085	0.071
	Days > CAAQS threshold (0.18 ppm)	0	0	0
Respirable particulate matter (PM <sub>10</sub> )	National Max (µg/m <sup>3</sup> )	79.0	84.0	155.8
	National Annual Average (µg/m <sup>3</sup> )	33.5	32.7	29.7
	Days > NAAQS threshold (150 µg/m <sup>3</sup> )	0	0	1
	State Max (µg/m <sup>3</sup> )	79.0	83.0	155.4
	State Annual Average (µg/m <sup>3</sup> )	—	32.5	29.5
	Days > CAAQS threshold (50 µg/m <sup>3</sup> )	10	4	4
Fine particulate matter (PM <sub>2.5</sub> )				
—				

Source: CARB, iADAM: Air Quality Data Statistics.

Note: (—) = Data not available.

## Sensitive Receptors

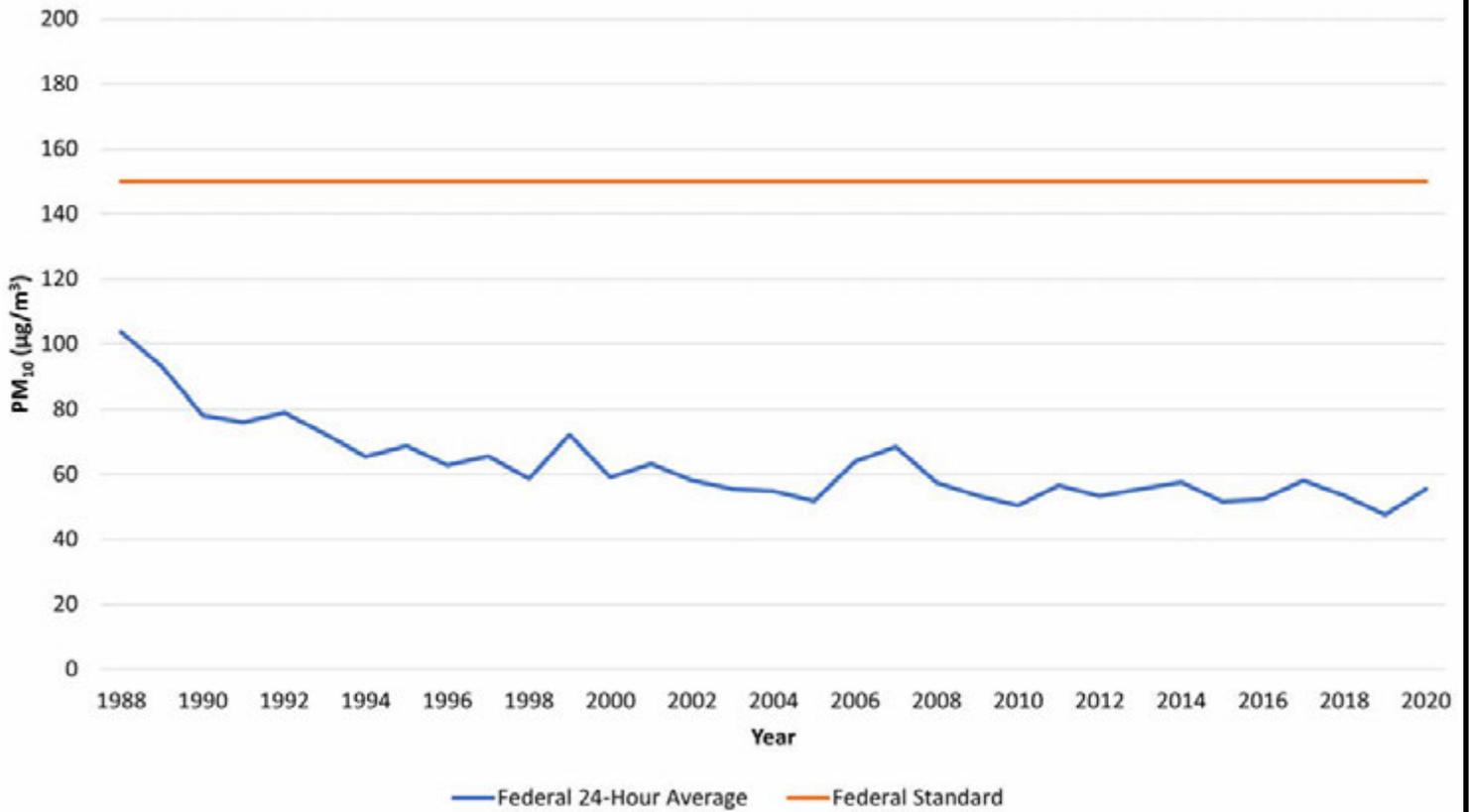
Some receptors are considered more sensitive to air pollutants than others, because of preexisting health problems, proximity to the emissions source, or duration of exposure to air pollutants. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality related health problems than the general public. Residential areas are also considered sensitive to poor air quality because people in residential areas are often at home for extended periods. Recreational land uses are moderately sensitive to air pollution because vigorous exercise associated with recreation places having a high demand on respiratory system function. CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups. Sensitive receptors around the Project Site are shown in **Figure IV.B-8: Sensitive Receptor Map**.



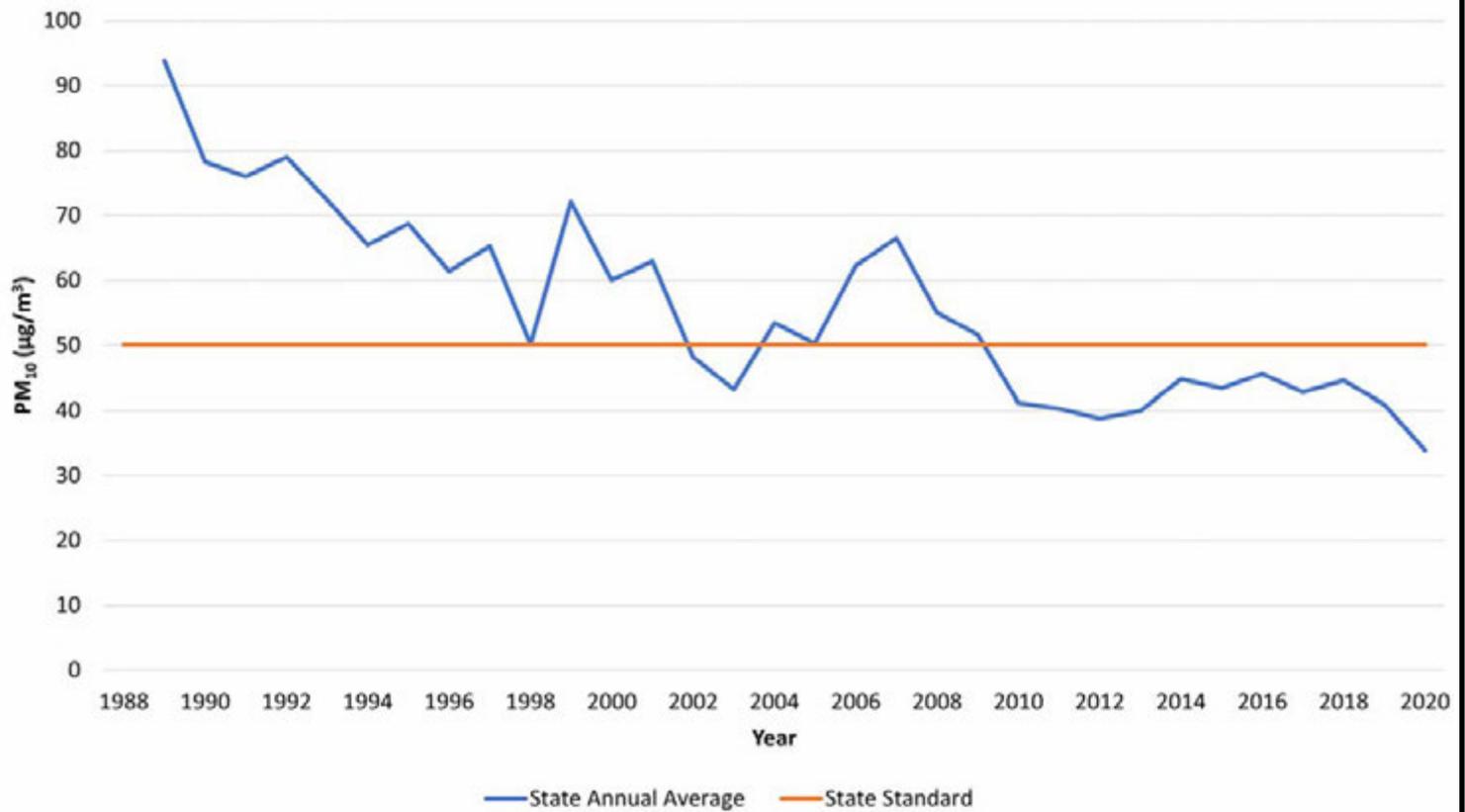
SOURCE: SCAQMD, Historical Ozone Air Quality Trends - 2021

FIGURE IV.B-1

**Air Basin Average 24-Hour Concentration PM<sub>10</sub> Trend (Federal Standard)**



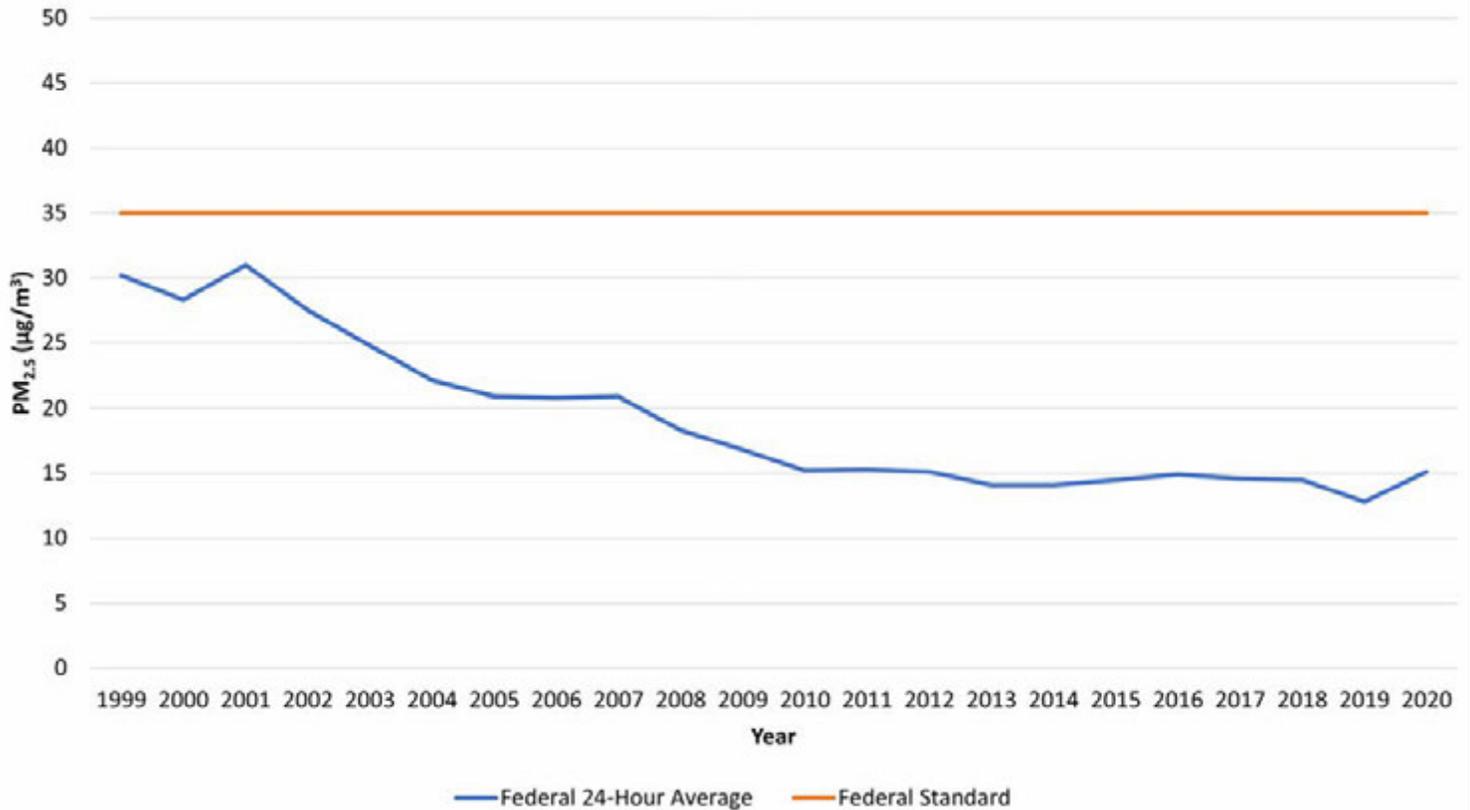
**Air Basin Annual Average Concentration PM<sub>10</sub> Trend (State Standard)**



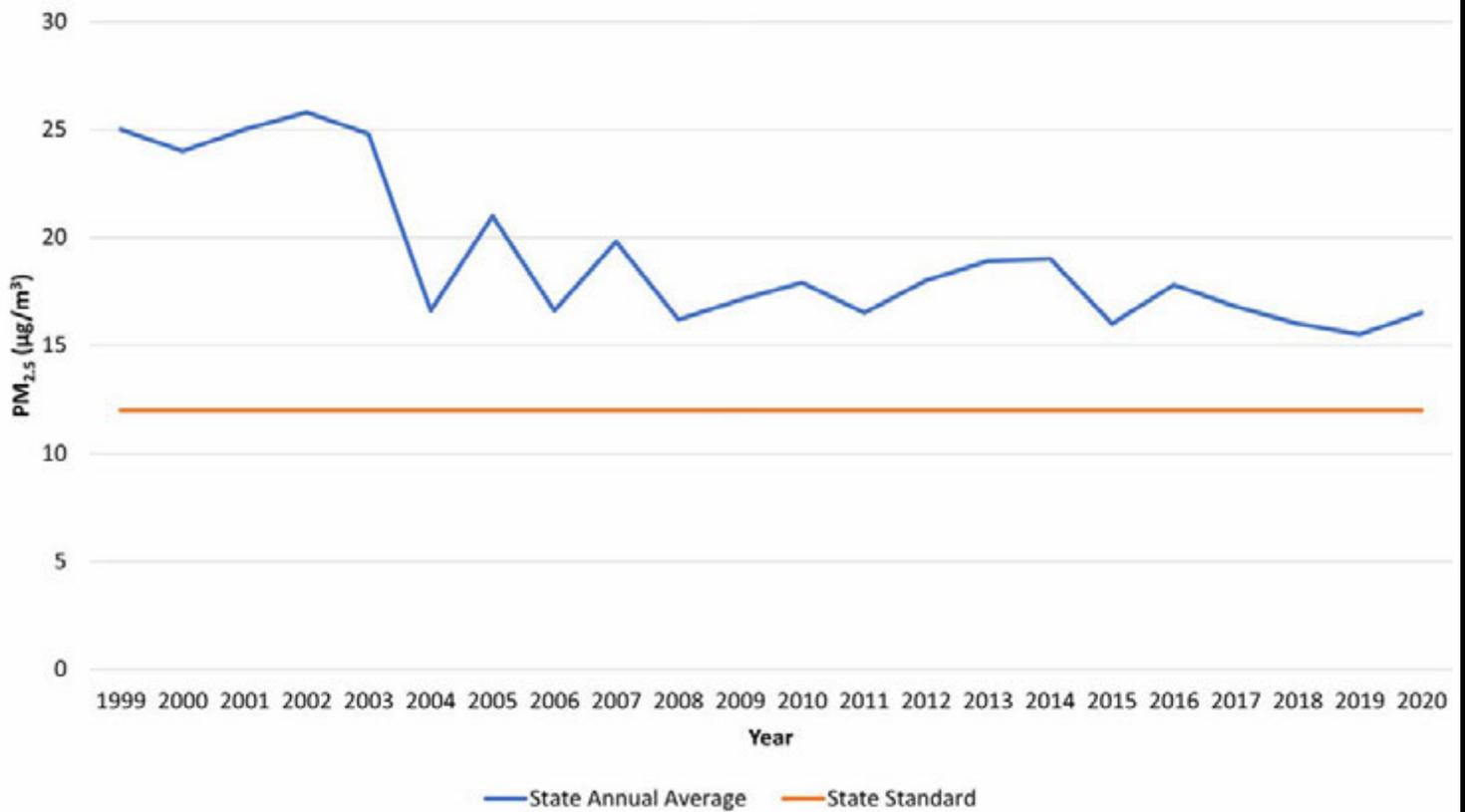
SOURCE: CARB, iADAM: Air Quality Data Statistics, Top Four Summary, South Coast Air Basin - 2021

FIGURE IV.B-2

**Air Basin Average 24-Hour Concentration PM<sub>2.5</sub> Trend (Federal Standard)**



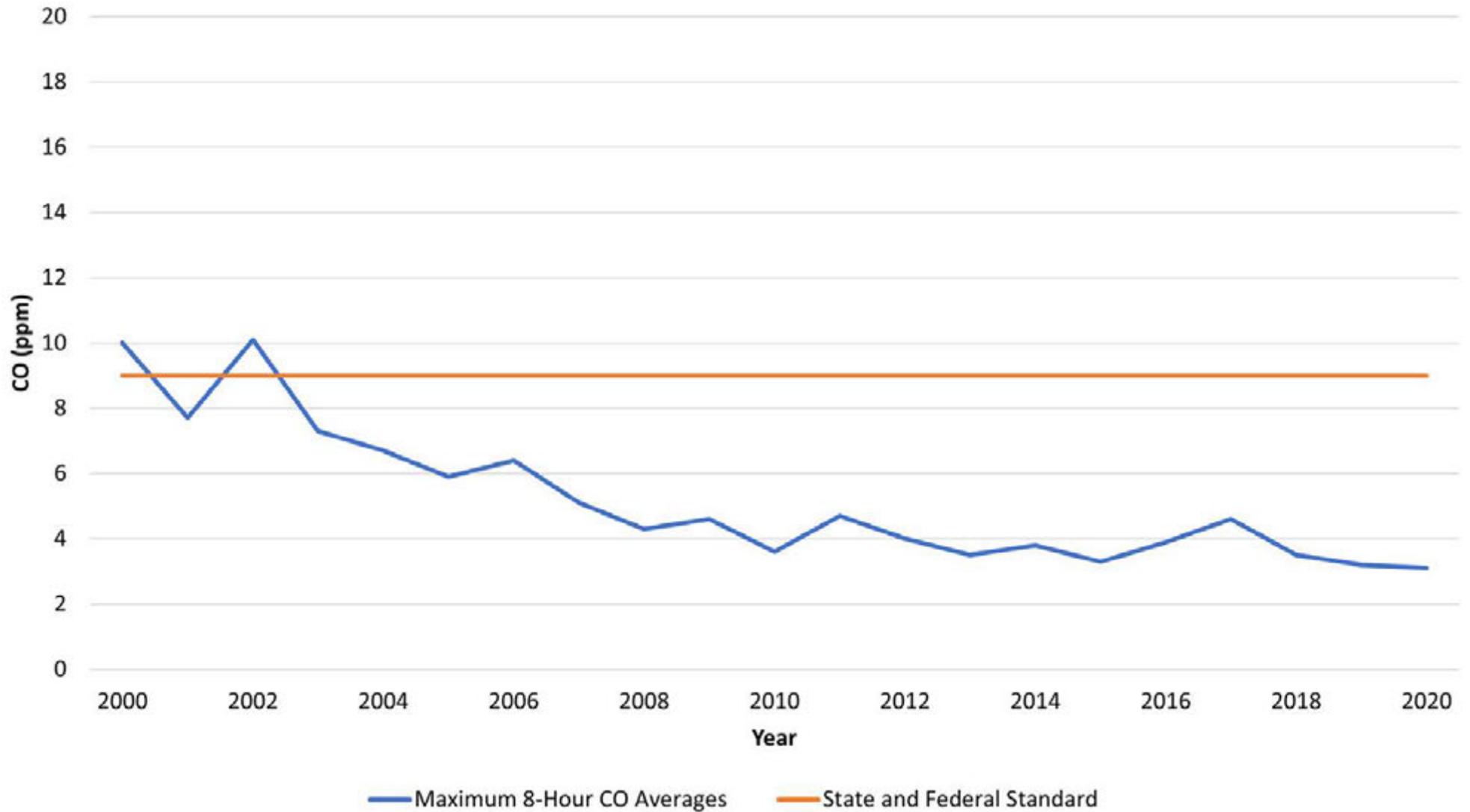
**Air Basin Annual Average Concentration PM<sub>2.5</sub> Trend (State Standard)**



SOURCE: CARB, iADAM: Air Quality Data Statistics, Top Four Summary, South Coast Air Basin - 2021

FIGURE IV.B-3

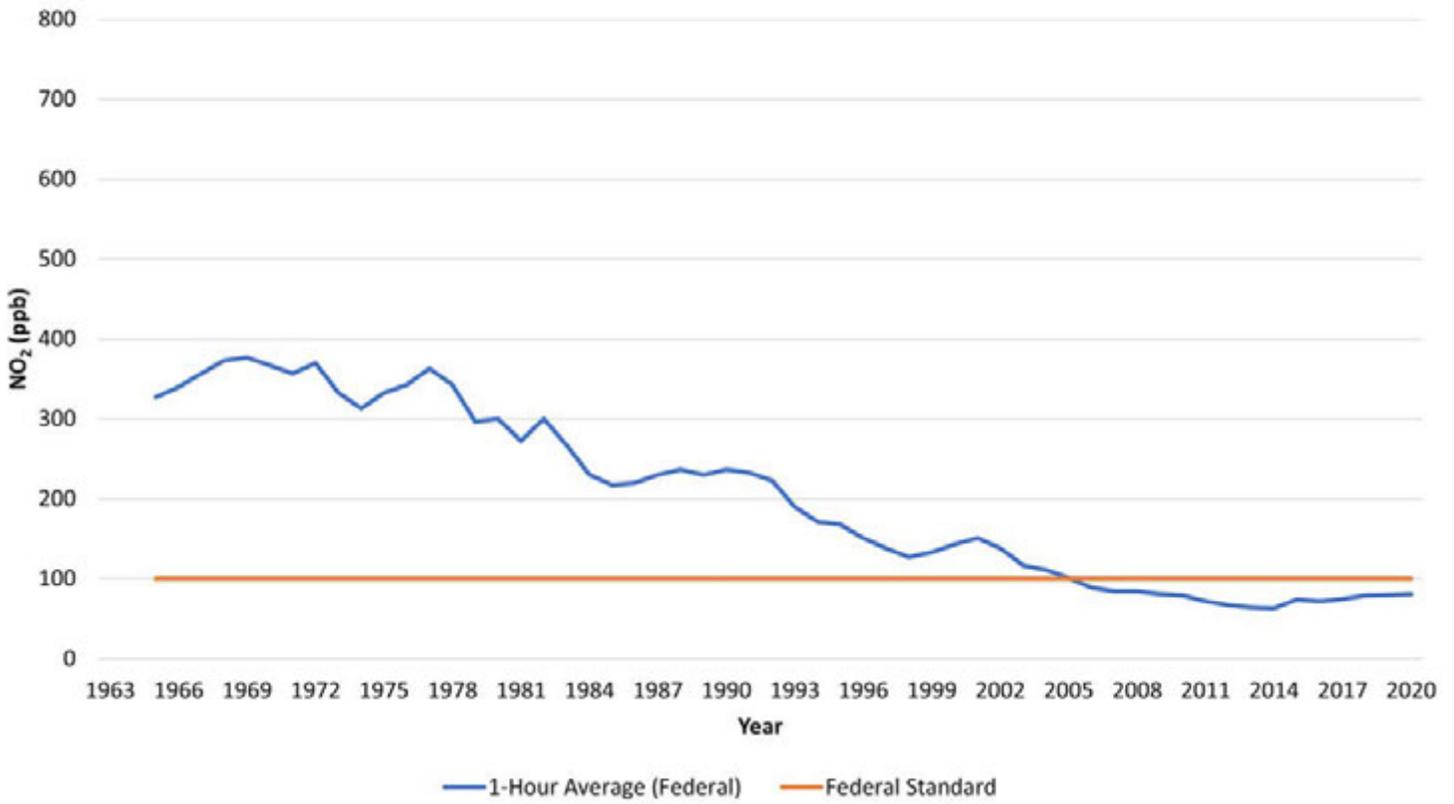
### Air Basin 8-Hour Average Concentration CO Trend



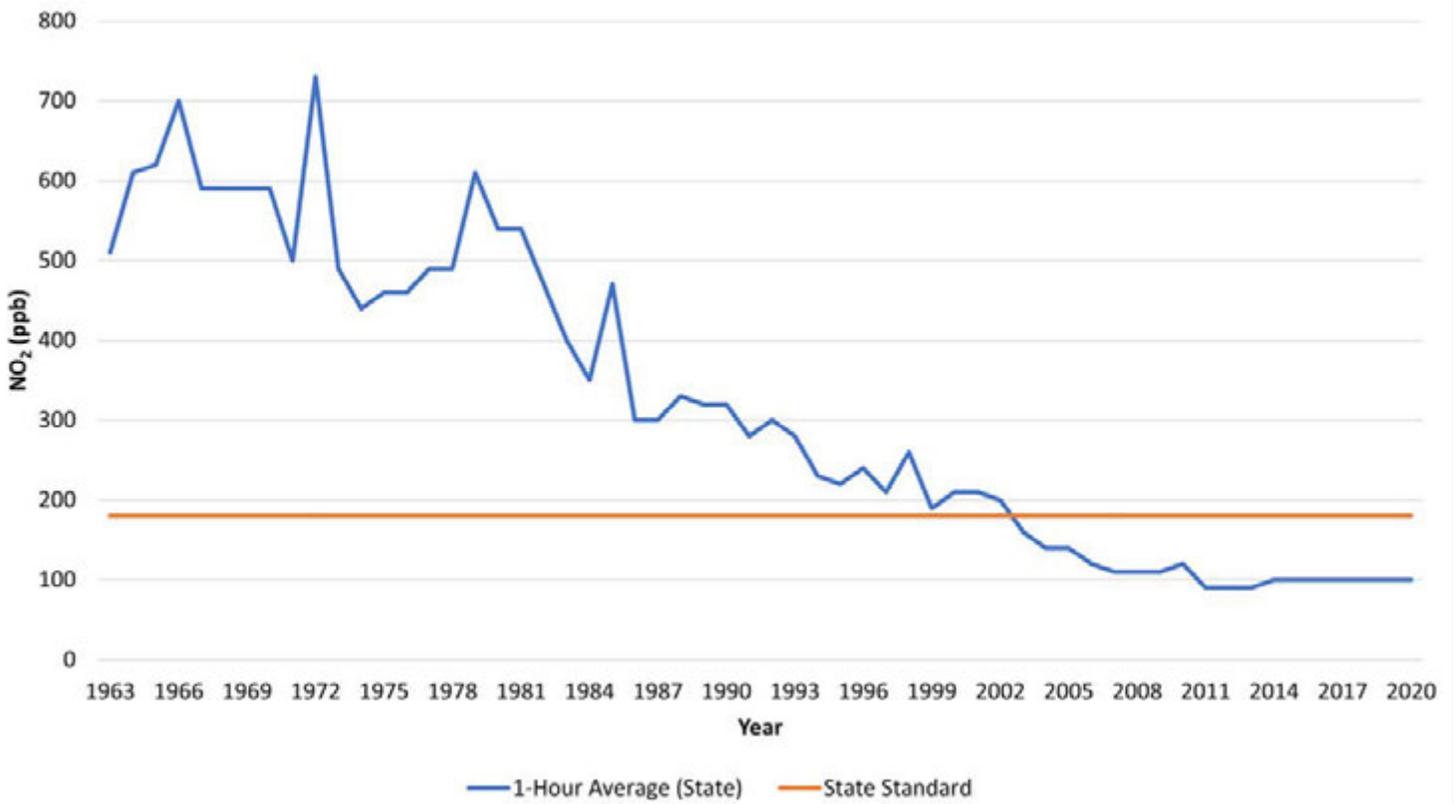
SOURCE: SCAQMD, Historical Data by Year - 2021

FIGURE IV.B-4

**Air Basin 1-Hour Average Concentration NO<sub>2</sub> Trend (Federal Standard)**



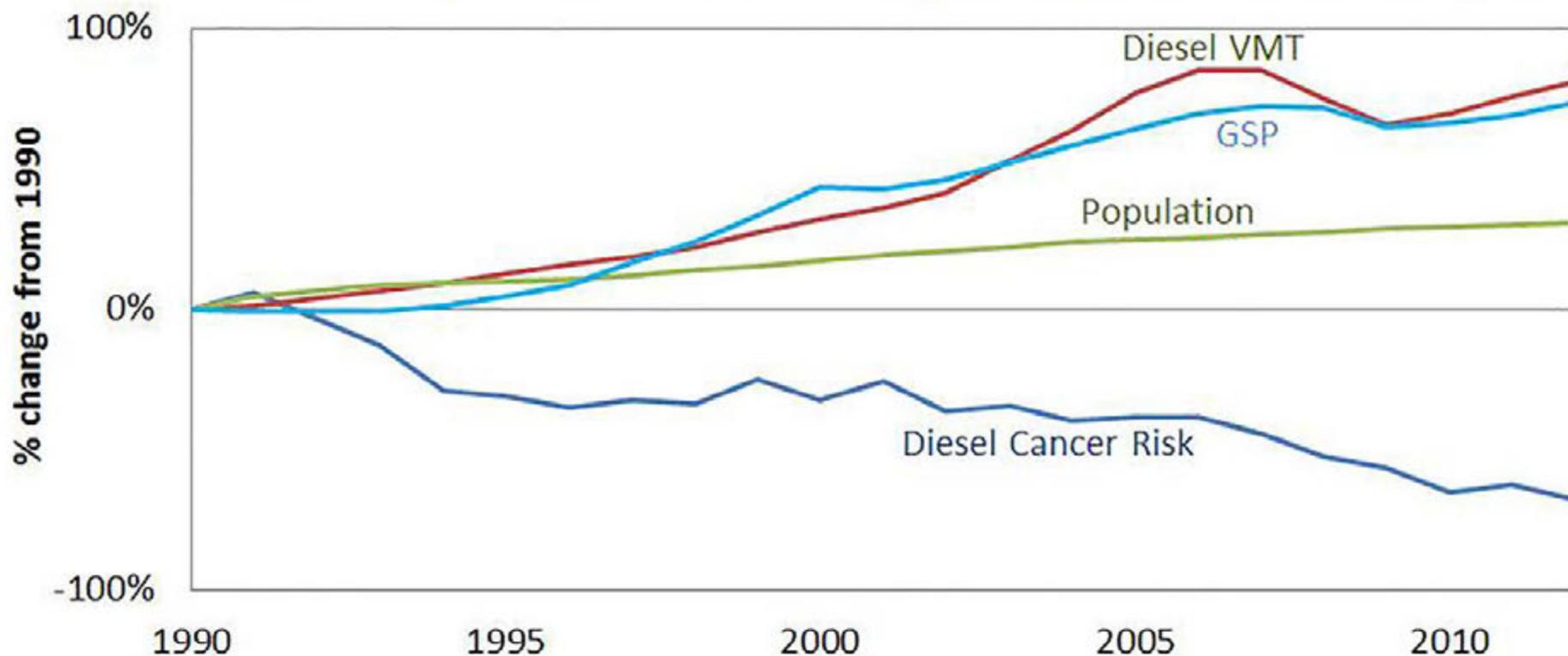
**Air Basin 1-Hour Average Concentration NO<sub>2</sub> Trend (State Standard)**



SOURCE: CARB, iADAM: Air Quality Data Statistics, Top Four Summary, South Coast Air Basin - 2021

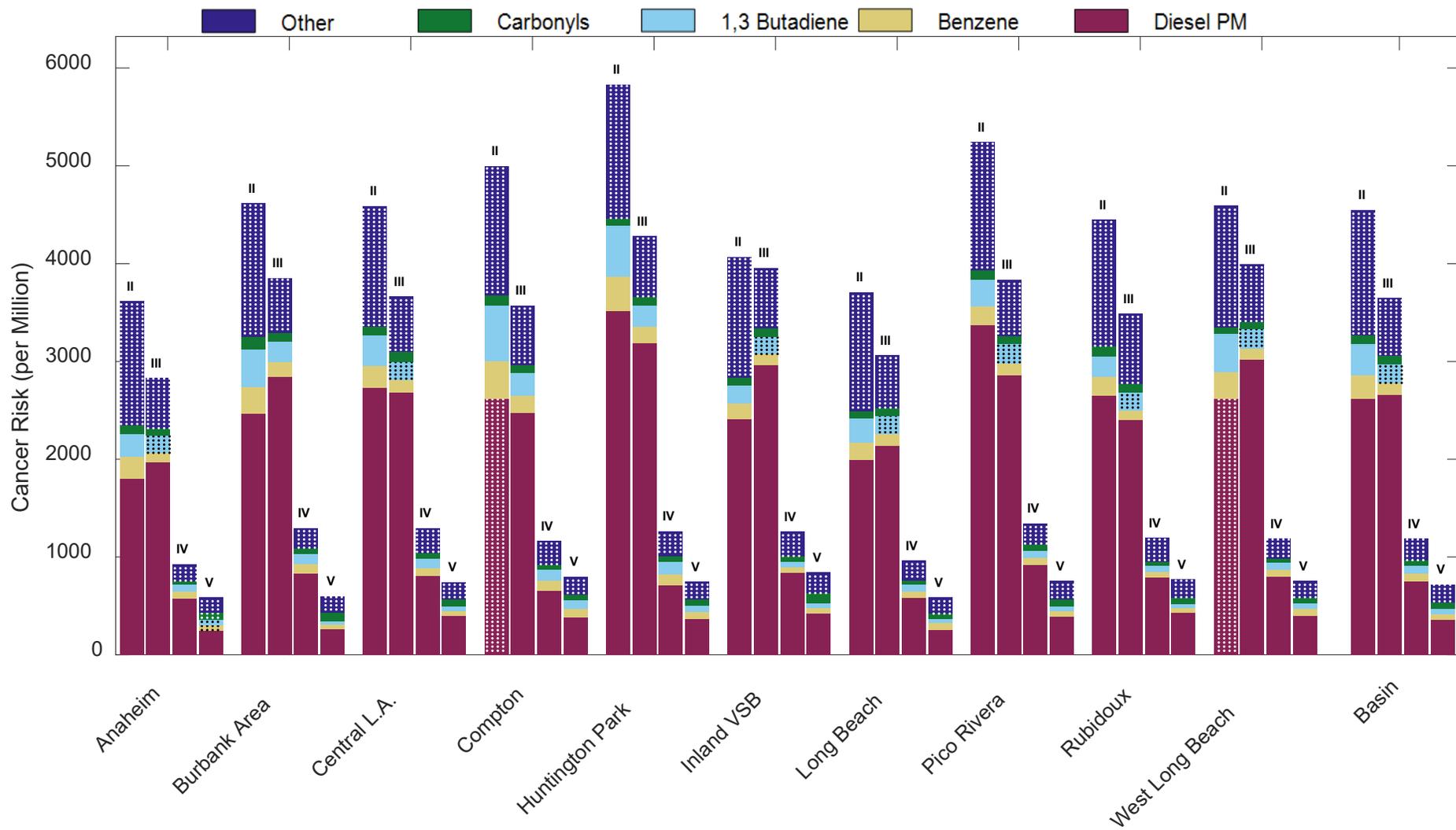
FIGURE IV.B-5

## California Population, Gross State Product (GSP), Diesel Cancer Risk, Diesel Vehicle-Miles-Traveled (VMT)



SOURCE: CARB, Overview: Diesel Exhaust and Health - 2021

FIGURE IV.B-6

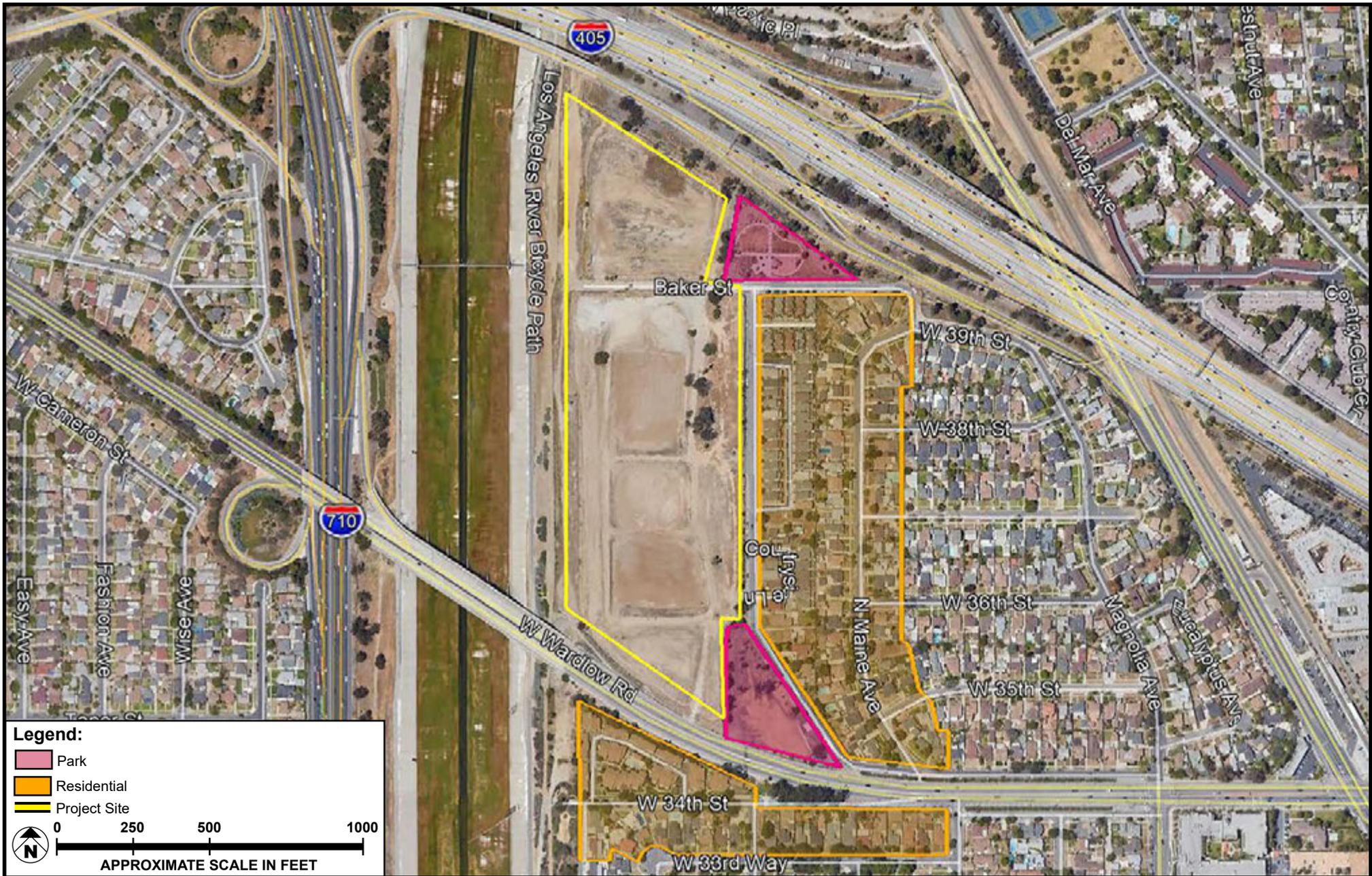


SOURCE: SCAQMD, MATES V Final Report – 2021

FIGURE IV.B-7



### Average Cancer Risk Trends at MATES Monitoring Sites



SOURCE: Google Earth - 2021

FIGURE IV.B-8

### 3. REGULATORY SETTING

#### Federal

##### *Clean Air Act*

The USEPA is responsible for the implementation of portions of the CAA<sup>36</sup> of 1970, which regulates certain stationary and mobile sources of air emissions and other requirements. Charged with handling global, international, national, and interstate air pollution issues and policies, the USEPA sets national vehicle and stationary source emission standards, oversees the approval of all State Implementation Plans,<sup>37</sup> provides research and guidance for air pollution programs, and sets NAAQS.<sup>38</sup> NAAQS for the six common air pollutants (O<sub>3</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, NO<sub>2</sub>, CO, Pb, and SO<sub>2</sub>) are identified in the CAA.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA that are most applicable to the Basin include Title I, Nonattainment Provisions, and Title II, Mobile Source Provisions.

The NAAQS were also amended in July 1997 to include an 8-hour standard for O<sub>3</sub> and to adopt a NAAQS for PM<sub>2.5</sub>. The NAAQS were amended in September 2006 to include an established methodology for calculating PM<sub>2.5</sub> and to revoke the annual PM<sub>10</sub> threshold. The CAA includes the following deadlines for meeting the NAAQS within the Basin: (1) 24-hour PM<sub>2.5</sub> by the year 2019, which has not been updated since the adoption of the 2016 AQMP and (2) 8-hour O<sub>3</sub> by the year 2024. In addition, more stringent area requirements now apply including implementation of Best Available Control Measures/Best Available Control Technology (BACM/BACT), a lower major source threshold (from 100 tons per year to 70 tons per year), and an update to the reasonable further progress (RFP) analysis.<sup>39</sup>

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36 42 U.S.C § 7401, et seq.

37 A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain National Ambient Air Quality Standards (NAAQS).

38 The NAAQS were established to protect public health, including that of sensitive individuals; for this reason, the standards continue to change as more medical research becomes available regarding the health effects of the criteria pollutants. The primary NAAQS define the air quality considered necessary, with an adequate margin of safety, to protect the public health.

39 SCAQMD, Final 2016 Air Quality Management Plan (2017), <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>. Accessed April 2021.

## State

### ***California Clean Air Act***

The California CAA, signed into law in 1988, requires all areas of the State to achieve and maintain the California AAQS by the earliest practicable date. CARB, a part of the CalEPA, is responsible for the coordination and administration of both State and federal air pollution control programs within California. In this capacity, CARB conducts research, sets State AAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions and the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the State. The CAAQS include more stringent standards than the NAAQS.

### ***California Air Toxics Program***

The California Air Toxics Program was established in 1983, when the California Legislature adopted Assembly Bill (AB) 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and the OEHHA determine if a substance should be formally identified, or “listed,” as a TAC. Since inception of the program, a number of such substances have been listed. In 1993, the California Legislature amended the program to identify the 189 federal hazardous air pollutants (HAPs) as TACs. In 1999, CARB completed the final staff report, *Update to the Toxic Air Contaminant List*. The list represented the priorities for identifying and regulating substances as directed by State law. The report described the process followed by CARB in reviewing and revising the TAC List and presented changes to the list.

In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has promulgated a number of airborne toxic control measures (ATCMs), both for mobile and stationary sources. In 2004, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to DPM and other TACs (see below for additional information).

### ***Air Toxics “Hotspots” Program (AB 2588)***

AB 2588 was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The Air Toxics program’s goals include collecting emission data, identifying facilities having localized impacts, ascertaining health risks, notifying nearby residents of significant risks, and reducing those significant risks to acceptable levels. The Air Toxics program provides direction and criteria to facilities on how to compile and submit air toxic emission data required by the “Hot Spots” Program, and requires the local air district to prioritize facilities to determine which facilities

must perform a health risk assessment. Facilities identified as high risk are required to reduce their toxic emissions to acceptable levels as determined by the local air district.<sup>40</sup>

### ***California Code of Regulations***

The California Code of Regulations (CCR) includes regulations that pertain to air quality emissions. Specifically, 13 Cal. Code of Regs. § 2485 limits idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction to 5 minutes at any location. Additionally, 17 Cal. Code of Regs. § 93115 requires operation of any stationary, diesel-fueled, compression-ignition engines meet specified fuel and fuel additive requirements and emission standards.

### ***California Motor Vehicle Code***

The vehicle programs are a critical component in the SIP for achieving national ambient air quality standards in the South Coast.<sup>41</sup> They are also integral in CARB's Scoping Plan<sup>42</sup> to achieve the greenhouse gas (GHG) emission reduction goals that were established through the California legislation and Executive Orders.

### ***Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13 of the California Code of Regulations, Section 2485)***

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling<sup>43</sup> measure includes regulations that pertain to air quality emissions. Specifically, Section 2485 states that the idling of all diesel-fueled commercial vehicles weighing more than 10,000 pounds shall be limited to five minutes at any location. In addition, Section 93115 in Title 17 of the CCR<sup>44</sup> states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

### ***CARB Rule 2449, General Requirements for In-Use Off-Road Diesel-Fueled Fleets***

CARB Rule 2449 requires off-road diesel vehicles to limit nonessential idling to no more than five consecutive minutes.<sup>45</sup>

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40 CARB, AB 2588 Air Toxics "Hot Spots" Program, <http://www.arb.ca.gov/ab2588/ab2588.htm>. Accessed April 2021.

41 CARB, "California State Implementation Plans" (last reviewed September 21, 2018), <https://www.arb.ca.gov/planning/sip/sip.htm>. Accessed April 2021.

42 CARB, AB 32 Scoping Plan (January 8, 2018), <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed April 2021.

43 CARB, Section 2485 in Title 13 of the CCR, [https://www.arb.ca.gov/msprog/truck-idling/13ccr2485\\_09022016.pdf](https://www.arb.ca.gov/msprog/truck-idling/13ccr2485_09022016.pdf). Accessed April 2021.

44 CARB, Final Regulation Order: Amendments to the Airborne Toxic Control Measure For Stationary Compression Ignition Engines (May 19, 2011), <https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf>. Accessed April 2021.

45 CARB, Final Regulation Order: Regulation For In-Use Off-Road Diesel-Fueled Fleets, <https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation>. Accessed April 2021.

## **California Building Standards Code**

### **California Energy Code**

California's Energy Efficiency Standards for Residential and Nonresidential Buildings<sup>46</sup> were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 requires the design of building shells and components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

The California Energy Commission (CEC) adopted the Title 24 standards as well as the 2019 Title 24 standards, which became effective on January 1, 2020, and are applicable to the proposed Project.<sup>47</sup> The 2019 standards will continue to improve upon prior Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings.<sup>48</sup>

### **California Green Building Code**

The California Green Building Standards Code, which is Part 11 of the CCR, is commonly referred to as the CALGreen Code.<sup>49</sup> The most current version of the CALGreen building code went into effect in January 2020. The purpose is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, outdoor lighting standards, use and occupancy, location, and maintenance of all building and structures within its jurisdiction.

## **Regional**

### **South Coast Air Quality Management District**

The Project Site lies within the jurisdiction of the SCAQMD, and compliance with SCAQMD rules and guidelines is required. SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD, in coordination with the Southern California Association of Governments (SCAG), is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the Basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as "nonattainment" of the national and/or California AAQS. The term "nonattainment area" is used to refer to an air basin in which one or more AAQS are exceeded.

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46 California Energy Commission, 2019 Building Energy Efficiency Standards, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>. Accessed April 2021.

47 See California Energy Commission, 2019 Building Energy Efficiency Standards for additional information.

48 See California Energy Commission, 2019 Building Energy Efficiency Standards for additional information.

49 California Buildings Standards Commission, California Green Building Standards Code (Cal. Code Regs., Title 24, Part 11), <http://www.bsc.ca.gov/Home/CALGreen.aspx>. Accessed April 2021.

The SCAQMD approved a Final 2016 AQMP on March 3, 2017.<sup>50</sup> The 2016 AQMP includes transportation control measures developed by SCAG from the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), as well as the integrated strategies and measures needed to meet the NAAQS. The 2016 AQMP demonstrates attainment of the 1-hour and 8-hour ozone NAAQS as well as the latest 24-hour and annual PM<sub>2.5</sub> standards.

Under the Federal CAA, SCAQMD has adopted federal attainment plans for O<sub>3</sub> and PM<sub>10</sub>. The SCAQMD reviews projects to ensure that they would not (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay the timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan.

The SCAQMD is responsible for limiting the number of emissions that can be generated throughout the Basin by various stationary, area, and mobile sources. Specific rules and regulations have been adopted by the SCAQMD Governing Board. These rules and regulations limit the emissions that can be generated by various uses or activities and identify specific pollution reduction measures, which must be implemented in association with various uses and activities. These rules not only regulate the emissions of the federal and State criteria pollutants, but also toxic air contaminants and acutely hazardous materials. The rules are also subject to ongoing refinement by SCAQMD.

Among the SCAQMD rules applicable to the proposed Project are Rule 212 (Standards for Approving Permits and Issuing Public Notice), Rule 403 (Fugitive Dust), Rule 1113 (Architectural Coatings), Rule 1401 (New Source Review of Toxic Air Contaminants), and Regulation XIII (New Source Review). Rule 212 states that the Executive Officer has the power to deny a Permit to Construct or Permit to Operate based on standard operating procedures and required notifications. Rule 403 requires the use of stringent best available control measures to minimize PM<sub>10</sub> emissions during grading and construction activities. Rule 1113 requires reductions in the VOC content of coatings, with a substantial reduction in the VOC content limit for specified types of coatings. Rule 1401 requires limits for maximum individual cancer risk, cancer burden, and noncancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants. Regulation XIII requires new on-site facility nitrogen dioxide emissions to be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion such as boilers, emergency generators, and water heaters).

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50 SCAQMD, Final 2016 Air Quality Management Plan (2017), <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>. Accessed April 2021.

## ***CEQA Air Quality Handbook***

In 1993, the SCAQMD prepared its *CEQA Air Quality Handbook* (CEQA Handbook) to assist local government agencies and consultants in preparing environmental documents for projects subject to CEQA.<sup>51</sup> The CEQA Handbook and the Guidance Handbook describe the criteria that SCAQMD uses when reviewing and commenting on the adequacy of environmental documents. The Guidance Handbook provides the most up-to-date recommended thresholds of significance in order to determine if a project will have a significant adverse environmental impact. SCAQMD provides additional supplementation information including methodologies for estimating project emissions and mitigation measures that can be implemented to avoid or reduce air quality impacts on the Guidance Handbook website.<sup>52</sup> As discussed previously, air quality in the Air Basin has improved substantially over the years, primarily due to the impacts of air quality control programs at the federal, State and local levels. Air Quality levels continue to trend downward as the economy and population increase, demonstrating that it is possible to maintain a healthy economy while improving public health through air quality improvements.

## ***Southern California Association of Governments***

SCAG is the metropolitan planning organization (MPO) for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and serves as a forum for the discussion of regional issues related to transportation, the economy, community development, and the environment. As the federally-designated MPO for the Southern California region, SCAG is mandated by the federal government to research and develop plans for transportation, hazardous waste management, and air quality. Pursuant to California Health and Safety Code Section 40460(b),<sup>53</sup> SCAG has the responsibility for preparing and approving the portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is also responsible under the CAA for determining conformity of transportation projects, plans, and programs with applicable air quality plans.

With regard to air quality planning, SCAG has prepared and adopted the 2020–2045 RTP/SCS,<sup>54</sup> which includes a SCS that addresses regional development and growth forecasts. The SCAG 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic,

51 SCAQMD, Air Quality Analysis Guidance Handbook, <http://www.aqmd.gov/CEQA/hdbk.html>. Accessed April 2021.

52 SCAQMD, Frequently Asked CEQA Questions, <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/frequently-asked-questions>. Accessed April 2021.

53 California Health and Safety Code, Division 26. Air Resources, PART 3. Air Pollution Control Districts, Chapter 5.5. South Coast Air Quality Management District, ARTICLE 5. Plan, Section 40460(b).

[https://leginfo.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=40460.&lawCode=HSC](https://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=40460.&lawCode=HSC). Accessed April 2021.

54 Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Draft, <https://www.connectsocial.org/Pages/Connect-SoCal-Draft-Plan.aspx>. Accessed April 2021.

environmental, and public health goals, with a specific goal of achieving an 8 percent reduction in passenger vehicle GHG emissions on a per capita basis by 2020, 19 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level. Although the RTP/SCS is not technically an air quality plan, consistency with the RTP/SCS has air quality implications, including the reduction of VMT which reduces air quality emissions.

## Local

Local jurisdictions, such as the City of Long Beach, have the authority and responsibility to reduce air pollution through their police power and decision-making authority. With respect to land use decisions, the City is responsible for the assessment of potential air quality impacts and the identification of feasible mitigation measures related to air emissions associated with proposed projects.

### ***City of Long Beach General Plan***

The Air Quality Element of the City's General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies.<sup>55</sup> The Air Quality Element acknowledges the interrelationships among transportation and land use planning in meeting the City's air quality goals. The following goals and policies are applicable to the Project.

**Goal 6:** Minimize particulate emissions from the construction and operation of roads and buildings, from mobile sources, and from the transportation, handling and storage materials.

**Policy 6.1:** Control Dust. Further reduce particulate emissions from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses.

**Goal 7:** Reduce emissions through reduced energy consumption.

**Policy 7.1:** Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The

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<sup>55</sup> City of Long Beach, General Plan, Air Quality Element, <http://www.longbeach.gov/lbds/planning/advance/general-plan/>. Accessed April 2021.

City uses SCAQMD's CEQA Air Quality Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

### ***City of Long Beach Municipal Code***

Section 21.45.400 of the Long Beach Municipal Code (LBMC) further regulates public and private development to include various standards that promote green buildings. A green building, also known as a sustainable building, is a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water and other resources more efficiently; and reducing the overall impact on the environment. The City of Long Beach recognizes the benefit of green buildings and establishes a green building program.

### ***City of Long Beach Green Building Ordinance***

On May 12, 2009, the Long Beach City Council approved Ordinance No. ORD- 09-0013 (Subsection 21.45.400—Green Building Standards for Public and Private Development). The following types of projects are required to meet the intent of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) program at the Certified level:

- A new residential or mixed use building of 50 dwelling units and 50,000 gross sq. ft. or more.
- A new mixed use, or nonresidential building of 50,000 sq. ft. or more of gross floor area;
- The alteration of an existing residential or mixed use building that results in the addition of 50 dwelling units and 50,000 gross sq. ft. or more;
- The alteration of an existing mixed use, or nonresidential building that results in the expansion of 50,000 gross sq. ft. or more; and
- A new construction or substantial rehabilitation project for which the City provides any portion of funding.

The Project includes more than 50 residential units and is subject to this requirement.

## **4. ENVIRONMENTAL IMPACTS**

### **Thresholds of Significance**

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. In order to assist in determining whether a project would have a significant effect on the environment, the City finds a project may be deemed to have a significant impact to air quality, if it would:

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

The following criteria was used to evaluate air quality impacts:

### SCAQMD's CEQA Air Quality Handbook

Because of the SCAQMD's regulatory role in the Air Basin, the significance thresholds and analysis methodologies in the SCAQMD's *CEQA Air Quality Handbook*.<sup>56</sup> are used in evaluating project impacts for construction, operations, and air toxics.<sup>57</sup>

### Daily Emissions Thresholds

SCAQMD has identified thresholds to determine the significance of regional air quality emissions for construction activities and project operation, as shown in **Table IV.B-4: Mass Daily Emissions Thresholds**.

**Table IV.B-4**  
**Mass Daily Emissions Thresholds**

Pollutant	Construction	Operation
	Significant Threshold (pounds/day)	
Volatile organic compounds (VOCs)	55	55
Nitrogen dioxide (NO <sub>x</sub> )	55	55
Carbon monoxide (CO)	550	550
Sulfur dioxide (SO <sub>x</sub> )	150	150
Respirable particulate matter (PM <sub>10</sub> )	150	150
Fine particulate matter (PM <sub>2.5</sub> )	55	55

Source: SCAQMD, SCAQMD Air Quality Significance Thresholds, <http://www.aqmd.gov/ceqa/hdbk.html>. Accessed April 2021.

56 SCAQMD, Air Quality Analysis Guidance Handbook, <http://www.aqmd.gov/CEQA/hdbk.html>. Accessed April 2021.

57 SCAQMD Air Quality Significance Thresholds, <http://www.aqmd.gov/ceqa/hdbk.html>. Accessed April 2021.

## Localized Significance Thresholds

The local significance thresholds (LST) are based on the SCAQMD's Final *Localized Significance Threshold Methodology* (LST Methodology)<sup>58</sup> guidance document for short-duration construction activities. The SCAQMD recommends the evaluation of localized air quality impacts to sensitive receptors in the immediate vicinity of the Project Site because of construction activities. The SCAQMD provides voluntary guidance on the evaluation of localized air quality impacts to public agencies conducting environmental review of projects located within its jurisdiction. Localized air quality impacts are evaluated by examining the on-site generation of pollutants and their resulting downwind concentrations. For construction, pollutant concentrations are compared to significance thresholds for particulates (PM<sub>10</sub> and PM<sub>2.5</sub>), CO, and NO<sub>2</sub>. The significance threshold for PM<sub>10</sub> represents compliance with SCAQMD Rule 403 (Fugitive Dust). The threshold for PM<sub>2.5</sub> is designed to limit emissions and to allow progress toward attainment of the AAQS. Thresholds for CO and NO<sub>2</sub> represent the allowable increase in concentrations above background levels that would not cause or contribute to an exceedance of their respective AAQS.

The LST Methodology provides lookup tables of maximum allowable emissions in pounds per day that are based on area of a construction site from 1 acre up to 5 acres in size.<sup>59</sup> The threshold is a daily emissions level and thus the acreage is an approximation of the daily disturbed area.<sup>60</sup> However, LST mass rate look-up tables only apply to projects that are less than or equal to five acres. Lead agencies may use the LST mass rate look-up tables as a screening analysis. If the project exceeds any applicable LST when the mass rate look-up tables are used as a screening analysis, then project specific air quality modeling may be performed. In the event that the project area exceeds five acres, it is recommended that lead agencies perform project-specific air quality modeling for larger projects. As such, this analysis includes both a screening analysis utilizing the LST mass rate look-up tables and dispersion modeling to assess both on- and off-site emissions.

The ambient conditions for a 5.0-acre site within South Coastal Los Angeles County, as recorded in SRA 4 by the SCAQMD, were used for ambient conditions in determining appropriate threshold levels. Thresholds for each criteria pollutant for construction activity and Project operation are listed in **Table IV.B-5: Localized Significance Thresholds**.

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58 SCAQMD, Final Localized Significance Threshold (LST) Methodology, <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed April 2021.

59 SCAQMD, Final Localized Significance Threshold (LST) Methodology, Appendix C - Mass Rate LST Look-up Table, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2>. Accessed October 2021.

60 See Example 1 of SCAQMD Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/calceemod-guidance.pdf?sfvrsn=2>. Accessed October 2021

**Table IV.B-5  
Localized Significance Thresholds**

Pollutant	Construction	Operational
	pounds/day	
Nitrogen dioxide (NO <sub>2</sub> )	123	123
Carbon monoxide (CO)	1,530	1,530
Respirable particulate matter (PM <sub>10</sub> )	14	4
Fine particulate matter (PM <sub>2.5</sub> )	8	2

*Notes:*

*Based on a distance to sensitive receptors of 25 meters (82 feet). SCAQMD's Localized Significance Threshold (LST) Methodology for CEQA Evaluations guidance document provides that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.*

*LST values for 5.0-acre site.*

## Construction Emissions

In addition to the mass daily thresholds, a project is considered to result in a significant construction air quality impact if the project exceeds the concentration significance thresholds set forth in **Table IV.B-6: Ambient Air Quality Significance Thresholds for Criteria Pollutants**. Per SCAQMD guidance, the evaluated concentrations of CO, NO<sub>2</sub>, and SO<sub>2</sub> includes both the project contribution plus background concentrations.<sup>61</sup> The total concentration is then compared to the significance thresholds. For CO, NO<sub>2</sub>, and SO<sub>2</sub>, these significance thresholds are reflective of the CAAQS and NAAQS. Background concentrations were based on existing air monitoring stations near the proposed Project and represent existing air emissions sources within the Air Basin. Per SCAQMD guidance, the proposed Project's contribution of PM<sub>10</sub> and PM<sub>2.5</sub> is compared to the significance thresholds.

<sup>61</sup> SCAQMD, South Coast AQMD Modeling Guidance for AERMOD, <http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance>. Accessed July 2021.

**Table IV.B-6**  
**Ambient Air Quality Significance Thresholds for Criteria Pollutants**

Pollutant	Averaging Period	Pollutant Concentration Threshold
CO	1-hour /8-hour	SCAQMD is in attainment (Federal and State); project is significant if it causes or contributes to an exceedance of the attainment standards of 20 ppm (1-hour) and 9 ppm (8-hour)
NO <sub>2</sub>	1-hour	SCAQMD is in attainment (Federal and State); project is significant if it causes or contributes to an exceedance of the following attainment standard 0.18 ppm (State)
	Annual	0.03 ppm (State) and 0.0534 ppm (federal)
PM <sub>10</sub>	24-hour	10.4 µg/m <sup>3</sup> (construction) and 2.5 µg/m <sup>3</sup> (operation)
	Annual	1.0 µg/m <sup>3</sup> (construction and operation)
PM <sub>2.5</sub>	24-hour	10.4 µg/m <sup>3</sup> (construction) and 2.5 µg/m <sup>3</sup> (operation)
SO <sub>2</sub>	1-hour	0.25 ppm (State) and 0.075 ppm (federal)
	24-hour	0.04 ppm (State)
Lead	30-day Average	1.5 µg/m <sup>3</sup> (State)
	Rolling 3-month Average	0.15 µg/m <sup>3</sup> (Federal)

Source: SCAQMD, SCAQMD Air Quality Significance Thresholds, <http://www.aqmd.gov/ceqa/hdbk.html>. Accessed April 2021.

## Operational Emissions

In addition to the mass daily thresholds above, a project would normally have a significant impact on air quality from project operations if any of the following would occur:

- Operational emissions were to exceed 10 tons per year of VOCs or any of the daily thresholds presented above in **Table IV.B-4** (as reprinted from the CEQA Air Quality Handbook).
- Either of the following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:
  - The project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively; or
  - The incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard, or 0.45 ppm for the 8-hour CO standard.
- The project creates an objectionable odor at the nearest sensitive receptor.

## **Health Risk Assessment (Toxic Air Contaminants)**

Per the SCAQMD, a project would result in a significant health impact if the carcinogenic or toxic air contaminants individually or cumulatively are equal to or exceed the maximum individual cancer risk of ten in one million persons or a chronic and acute hazard index of 1.0, or the cancer burden of 0.5 excess cancer cases (in areas greater than or equal to one in one million).

## **Consistency with Applicable Plans and Policies**

Section 15125 of the State CEQA Guidelines<sup>62</sup> requires the EIR to identify any inconsistencies with applicable governmental plans and policies. The proposed Project's consistency analysis addresses consistency with the SCAQMD's AQMP,<sup>63</sup> the 2020-2045 SCAG RTP/SCS,<sup>64</sup> and policies included within the City's General Plan.<sup>65</sup>

## **5. METHODOLOGY**

Air pollutant emissions associated with the proposed Project would result from construction and operation of the proposed uses. Specific analysis methodologies for all Project related sources of air emissions are discussed below.

### **Emissions Inventory Modeling**

The California Emissions Estimator Model, known as CalEEMod, is the CARB-approved computer program model recommended by SCAQMD for use in the quantification of air quality emissions. CalEEMod was developed under the auspices of SCAQMD, with input from other California air districts. CalEEMod utilizes widely accepted models for emissions estimates combined with appropriate data that can be used if site-specific information is not available. For example, CalEEMod incorporates USEPA-developed emission factors; CARB's on-road and off-road equipment emission models, such as EMFAC and OFFROAD;<sup>66</sup> and studies commissioned by other California agencies, such as the California Energy Commission and California Department of Resources Recycling and Recovery (CalRecycle).

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62 State CEQA Guidelines, Section 15125.

63 SCAQMD, Final 2016 Air Quality Management Plan (2017), <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>. Accessed April 2021.

64 Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Final Plan, <https://www.connectsocial.org/Pages/Connect-SoCal-Final-Plan.aspx>. Accessed April 2021.

65 City of Long Beach, General Plan, <http://www.longbeach.gov/lbds/planning/advance/general-plan/>. Accessed April 2021.

66 EMFAC is an emissions factor model used to calculate emissions rates from on-road vehicles (e.g., passenger vehicles). OFFROAD is an emissions factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment). CalEEMod version 2016.3.2 utilizes CARB's 2014 version of EMFAC.

CalEEMod provides a platform to calculate both construction emissions and operational emissions from a land use development project. CalEEMod version 2016.3.2 was used to quantify the proposed Project's air quality pollutants. Project development would generate air pollutants from a number of individual sources during both construction and post-construction (operational) use of the buildings and related activities (e.g., painting operations and landscape maintenance). The following emission sources covered by CalEEMod model include:

- One-time construction emissions associated with site clearing and demolition, grading, construction of the retaining walls, utilities, water tank, and landscaping. Emission sources include both off-road construction equipment and on-road mobile equipment associated with workers and the delivery of construction materials to the Project Site. Construction emissions associated with dust control and disposal of waste at landfills are also included in the CalEEMod model.
- Operational emissions associated with the proposed uses, including on-road mobile vehicle traffic generated by the land uses; off-road emissions from landscaping equipment; energy (i.e., electricity and natural gas) and water usage in the buildings; and emissions from emergency generators, painting operations, and fuel use. The disposal of solid waste generated during the postconstruction use of the buildings is also included in the CalEEMod model.

Refer to **Section II: Project Description** of this Draft EIR, for more detailed characteristics of the Project. Information needed to parameterize the proposed Project in CalEEMod was obtained from the Project Applicant.

## Construction

**Table IV.B-7: Project Construction Schedule** provides the dates and durations of each of the activities will take place during construction, as well as a brief description of the scope of work. Future dates represent approximations based on the general Project timeline and are subject to change pending unpredictable circumstances that may arise.

Each phase of construction would result in varying levels of intensity and number of construction personnel. The construction workforce would consist of approximately 55 worker trips per day during grading; 681 worker trips per day and 259 vendor trips per day during building construction; 15 worker trips per day during paving; and 136 worker trips per day during architectural coating. Also included in construction activities are mobile source emissions from construction traffic. Construction traffic is generated by vendor deliveries of construction materials and construction worker daily trips to the Project Site. An assessment of air pollutant emissions was prepared utilizing the construction schedule in **Table IV.B-7**.

**Table IV.B-8: Project Construction Diesel Equipment Inventory** displays the construction equipment required for each activity described in **Table IV.B-7**. The proposed Project would be required to adhere to SCAQMD Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings) during construction activities.

**Table IV.B-7  
Project Construction Schedule**

Construction Activity	Start Date	End Date	Duration (Days)	Description
Site Clearing	10/1/2022	10/8/2022	5	Clearing vegetation and removing stones and other unwanted material or debris prior to grading
Bioremediation	10/9/2022	6/1/2023	169	Treatment of contaminated soil and subsurface material; removal of soil to landfill
Grading	6/2/2023	9/1/2023	66	Export of approximately 18,000 cubic yards of dirt
Building Construction	8/1/2023	6/1/2026	740	Construction of 226 residential units
Utility Installation/Street Paving	12/1/2023	7/1/2024	152	Paving of asphalt surfaces
Architectural Coating	3/1/2026	6/1/2026	66	Application of architectural coatings to building materials

Source: Refer to **Appendix IV.B.1** for CalEEMod output sheets.

**Table IV.B-8  
Project Construction Diesel Equipment Inventory**

Phase	Off-Road Equipment Type	Amount	Daily Hours	Horsepower [HP] (Load Factor)
Site Clearing	Rubber Tired Dozers	3	8	247 (0.40)
	Tractors/Loaders/Backhoes	4	8	97 (0.37)
Bioremediation	Rubber Tired Dozers	3	8	247 (0.40)
	Tractors/Loaders/Backhoes	4	8	97 (0.37)
Grading	Excavators	2	8	158 (0.38)
	Graders	1	8	187 (0.41)
	Rubber Tired Dozers	1	8	247 (0.40)
	Scrapers	2	8	367 (0.48)
	Tractors/Loaders/Backhoes	2	8	97 (0.37)
Building Construction	Cranes	1	7	231 (0.29)
	Forklifts	3	8	89 (0.20)
	Generator Sets	1	8	84 (0.74)
	Tractors/Loaders/Backhoes	3	7	97 (0.37)
	Welders	1	8	46 (0.45)
Utility Installation/ Street Paving	Pavers	2	8	130 (0.42)
	Paving Equipment	2	8	132 (0.36)
	Rollers	2	8	80 (0.38)
Architectural Coating	Air Compressors	1	6	78 (0.48)

Source: Refer to **Appendix IV.B.1** for CalEEMod output sheets.

## Operation

Analysis of the proposed Project's impact on regional air quality after Project development considers three types of sources: 1) area; 2) energy; and 3) mobile. Area source emissions are generated by, among other things, landscape equipment and the use of consumer products. Energy source emissions are generated as a result of activities in buildings which utilize electricity or natural gas utility infrastructure. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the proposed Project.

Localized impacts from Project operations included calculation of on-site emissions (e.g., combustion from natural gas usage) using SCAQMD's recommended CalEEMod and evaluation of these emissions consistent with the SCAQMD's LST methodology. Potential localized CO concentrations from induced traffic at nearby intersections are addressed consistent with the methodologies and assumptions used in the consistency analysis provided in the SCAQMD 2003 AQMP. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

## Health Risk Assessment

Dispersion modeling was performed using the American Meteorological Society (AMS)/Environmental Protection Agency (EPA) Regulatory Model (AERMOD). This model is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the release heights of the emission sources (i.e., complex terrain). AERMOD is the U.S. EPA's regulatory dispersion model specified in the Guideline for Air Quality Methods.<sup>67</sup> AERMOD is recommended for use by the South Coast Air Quality Management District (SCAQMD), which has established its own modeling guidance for the model.<sup>68</sup> The dispersion modeling for the Project utilized preprocessed meteorological data from the Long Beach Airport Meteorological Station, which is the station nearest to the Project site obtained from SCAQMD.<sup>69</sup> The meteorological data was collected for the years between January 2012 and December 2016.

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67 U.S. EPA Code of Federal Regulations, Title 40, Part 51, Appendix W

68 SCAQMD Modeling Guidance for AERMOD, <http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/modeling-guidance>.

69 SCAQMD Meteorological Data for AERMOD, [www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod](http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod)

### **Construction On- and Off-site Emissions**

Construction of the proposed Project would include on-site emissions from fugitive dust and off-road equipment. Construction would include site clearing of existing vegetation, bioremediation to treat contaminated soil and subsurface material beneath the proposed residential area, grading and compaction of on-site earth materials, building construction, utility installation/street improvements, and architectural coating. Maximum emission estimates were generated by reviewing available CalEEMod output files for the mitigated exhaust PM10 pollutant category. The California Air Resource Board (CARB) classifies diesel particulate matter (DPM) from the combustion of diesel fuel in off-road construction equipment engines and on-road trucks. In addition, CARB classifies DPM as a toxic air contaminant (TAC) and uses PM10 emissions from diesel exhaust as a surrogate for DPM. This source was included into the AERMOD dispersion model as volume sources within the Project site.

Construction of the proposed Project would require worker, haul, and vendor truck trips to and from the site to work on the site, export demolition debris, and deliver supplies to the site. Trucks traveling to and from the Project Site would be required to travel along a haul route approved by the City. A new access driveway would be created directly from Wardlow Road to avoid truck travel adjacent to the single-family residential uses along Golden Avenue. During construction, access and egress would be controlled through construction management measures such as flagmen, signage and cones. Approximately 9,000 total hauling trips (169 days) would take place during the bioremediation phase, totaling to approximately 53 haul truck trips per workday. Additionally, approximately 13,000 total haul truck trips (66 days) would take place during the grading phase, totaling to approximately 197 haul truck trips per workday. This source was included into the AERMOD dispersion model as line volume sources along the proposed haul route.

### **Mobile**

In accordance with CARB guidance, high volume roads and freeways are the primary sources of diesel exhaust emissions (a TAC) within urban areas. Freeways or urban roads experiencing 100,000 or more vehicles/day could expose sensitive receptors to adverse health risks. CARB recommends that local agencies avoid siting new, sensitive land uses within 500 feet of a freeway, within 1,000 feet of a distribution center that accommodate more than 100 diesel trucks per day, or within 1,000 feet of rail yards. The primary concern is the effect of diesel exhaust particulate, a TAC, on sensitive uses. The primary source of diesel exhaust particulates near the project site is heavy traffic along the I-710 freeway, which is located approximately 640 feet west of the Project Site, vehicles on the I-405 freeway which is located approximately 620 feet north of the Project Site, and Wardlow Road which is located approximately 75 feet south of the Project Site.

## 6. PROJECT IMPACTS

**Threshold IV.AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?**

### ***Consistency with AQMP***

A consistency determination with regard to the SCAQMD's AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. In accordance with the procedures established in the SCAQMD's *CEQA Air Quality Handbook*,<sup>70</sup> the analysis below addresses the criteria identified by the SCAQMD to determine the proposed Project's consistency with SCAQMD and SCAG air quality related policies.

- Will the project result in any of the following:
  - Increase the frequency or severity of existing air quality violations?
  - Cause or contribute to new air quality violations?

According to the SCAQMD's CEQA Handbook, the consistency determination based on the first criterion pertains to ambient pollutant concentrations, rather than to total regional emissions, thus, requiring an analysis of the proposed Project's pollutant emissions relative to localized pollutant concentrations.<sup>71</sup> A complete review of the proposed Project's potential impact on ambient pollutant concentrations during construction and operation is provided below.

### ***Regional Construction***

It is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for fugitive dust. Rule 403 control requirements include measures to prevent the generation of visible dust plumes. Measures include, but are not limited to, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system or other control measures to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site, and maintaining effective cover over exposed areas. In addition, SCAQMD Rule 1113 would limit the VOC content of architectural coatings. Thus, compliance with these SCAQMD rules is incorporated into the analysis provided below.

The maximum daily regional construction emissions are provided in **Table IV.B-9: Unmitigated Maximum Regional Construction Emissions**.

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<sup>70</sup> SCAQMD, CEQA Air Quality Handbook (April 1993), p. 12-3.

<sup>71</sup> SCAQMD, CEQA Air Quality Handbook, p. 12-3, 1993.

**Table IV.B-9**  
**Unmitigated Maximum Regional Construction Emissions**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
	pounds/day					
Unmitigated Year 2022	4	59	25	<1	11	6
Unmitigated Year 2023	7	127	75	<1	21	8
Unmitigated Year 2024	4	29	46	<1	6	2
Unmitigated Year 2025	3	18	30	<1	6	2
Unmitigated Year 2026	32	19	33	<1	6	2
Maximum	32	127	75	<1	21	8
SCAQMD threshold	75	100	550	150	150	55
<b>Threshold exceeded?</b>	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Refer to **Appendix IV.B.1** for CalEEMod output sheets.

CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM<sub>10</sub> = particulate matter less than 10 microns; PM<sub>2.5</sub> = particulate matter less than 2.5 microns; VOC = volatile organic compounds; SO<sub>x</sub> = sulfur oxides.

Ambient pollutant concentrations standards are forecasted for all criteria pollutants during Project construction. These impacts would be temporary in nature, lasting only for the construction period, and would not have a long-term impact on the region's ability to meet State and federal air quality standards. As shown in **Table IV.B-9**, the daily maximum regional construction emissions would not exceed the SCAQMD daily significance thresholds for VOC, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. However, the construction emissions would result in an exceedance of daily NO<sub>x</sub> emissions. Therefore, the daily regional impact of NO<sub>x</sub> emissions would be considered a potentially significant impact.

Off-road diesel vehicles, which include construction equipment, are regulated by the CARB for both in-use (existing) and new engines. CARB has set standards for four tiers of new off-road diesel engines. Tier 1 standards began in 1996. Tiers 2 and 3 were adopted in 2000 and were more stringent than the Tier 1 standards. Tier 2 and Tier 3 standards were completely phased in by 2006 and 2008, respectively. Tier 4 standards became effective in 2011. Tier 4 emission standards significantly reduce PM and NO<sub>x</sub> emissions. Implementation of **Mitigation Measure (MM) MM AQ-1** would require the on-site construction equipment fleet to meet EPA Tier 4 Final standards for all off-road diesel-powered construction equipment greater than 50 horsepower (hp) and would require all construction equipment to be outfitted with BACT devices certified by CARB. The emission levels in **Table IV.B-10: Mitigated Maximum Regional Construction Emissions** represent the maximum daily emissions projected to occur with implementation of **MM AQ-1**. As presented in **Table IV.B-10**, the mitigated daily maximum regional construction emissions would not exceed any of the SCAQMD thresholds. Therefore, regional construction emissions would result in a less than significant short-term air quality impact during construction with mitigation.

**Table IV.B-10**  
**Mitigated Maximum Regional Construction Emissions**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
	pounds/day					
Mitigated Year 2022	1	28	26	<1	9	4
Mitigated Year 2023	3	84	81	<1	19	6
Mitigated Year 2024	2	9	50	<1	5	1
Mitigated Year 2025	2	8	31	<1	5	1
Mitigated Year 2026	31	8	34	<1	6	2
Maximum	31	84	81	<1	19	6
SCAQMD threshold	75	100	550	150	150	55
<b>Threshold exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Refer to **Appendix IV.B.1** for CalEEMod output sheets.

CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM<sub>10</sub> = particulate matter less than 10 microns; PM<sub>2.5</sub> = particulate matter less than 2.5 microns; VOC = volatile organic compounds; SO<sub>x</sub> = sulfur oxides.

### Regional Operation

On-road mobile vehicles, electricity, natural gas, water, landscape equipment, solid waste, and wastewater would generate the majority of emissions on-site during Project operation. The primary source of long-term criteria air pollutant emissions would be from Project-generated vehicle trips. The maximum daily regional operational emissions are provided in **Table IV.B-11: Unmitigated Maximum Regional Operational Emissions**. As shown in **Table IV.B-11**, operational emission levels would not exceed the SCAQMD daily regional thresholds and, as such, would result in less than significant operation impacts.

**Table IV.B-11**  
**Unmitigated Maximum Regional Operational Emissions**

Source	VOCs	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
	pounds/day					
Area	7	3	20	<1	<1	<1
Energy	<1	1	<1	<1	<1	<1
Mobile	5	5	50	<1	13	4
Total	12	10	70	<1	13	4
SCAQMD threshold	55	55	550	150	150	55
<b>Threshold exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Refer to **Appendix IV.B.1** for CalEEMod output sheets.

Note: ( ) = To be deducted from proposed operational emissions.

CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM<sub>10</sub> = particulate matter less than 10 microns; PM<sub>2.5</sub> = particulate matter less than 2.5 microns; VOCs = volatile organic compounds; SO<sub>x</sub> = sulfur oxides.

### Localized Emissions

The maximum localized construction and operational emissions are provided in **Table IV.B-12: Unmitigated Localized Construction and Operational Emissions**. As shown in **Table IV.B-12**, the unmitigated daily localized construction and operational emissions would not exceed the SCAQMD daily localized significance thresholds for NO<sub>x</sub>, CO, and PM<sub>10</sub>. However, the construction emissions would result in an exceedance of localized PM<sub>2.5</sub> emissions. Therefore, the localized impact of PM<sub>2.5</sub> emissions would be considered a potentially significant impact.

**Table IV.B-12**  
**Unmitigated Localized Construction and Operational Emissions**

Source	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
	pounds/day			
<b>Construction</b>				
Total maximum on-site emissions	35	28	8	5
LST threshold <sup>a</sup>	123	1,530	14	4
<b>Threshold exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>Yes</b>
<b>Operation</b>				
Buildout Area/energy emissions	4	20	<1	<1
LST threshold	123	1,530	8	2
<b>Threshold exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Refer to **Appendix IV.B.1** for CalEEMod output sheets.

CO = carbon monoxide; LST = localized significance threshold; NO<sub>x</sub> = nitrogen oxides; PM<sub>10</sub> = particulate matter less than 10 microns; PM<sub>2.5</sub> = particulate matter less than 2.5 microns.

<sup>a</sup> LST for a 5-acre site

As discussed previously, **MM AQ-1** would require the on-site construction equipment fleet to meet EPA Tier 4 Final standards for all off-road diesel-powered construction equipment greater than 50 horsepower (hp) and would require all construction equipment to be outfitted with BACT devices certified by CARB. Tier 4 emission standards significantly reduce PM and NO<sub>x</sub> emissions. The emission levels in **Table IV.B-13: Mitigated Localized Construction Emissions** represent the maximum daily emissions projected to occur with implementation of **MM AQ-1**. As presented in **Table IV.B-13**, the mitigated daily maximum localized construction emissions would not exceed any of the SCAQMD LSTs. Therefore, localized construction would result in a less than significant short-term air quality impact during construction with mitigation.

**Table IV.B-13  
Mitigated Localized Construction Emissions**

Source	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
	pounds/day			
<b>Construction</b>				
Total maximum on-site emissions	3	33	6	3
LST threshold <sup>a</sup>	123	1,530	14	4
<b>Threshold exceeded?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Refer to **Appendix IV.B.1** for CalEEMod output sheets.

CO = carbon monoxide; LST = localized significance threshold; NO<sub>x</sub> = nitrogen oxides; PM<sub>10</sub> = particulate matter less than 10 microns; PM<sub>2.5</sub> = particulate matter less than 2.5 microns.

<sup>a</sup> LST for a 5-acre site

At the State level, CARB is primarily responsible for reducing emissions from motor vehicles and consumer products. SCAQMD has authority over most area sources and all point sources. Approximately 90 percent of NO<sub>x</sub> and 75 percent of VOC emissions from the 2012 inventory are from sources primarily under CARB and USEPA control. Conversely, 56 percent of SO<sub>x</sub> emissions and 66 percent of the directly emitted PM<sub>2.5</sub> emissions are from sources under SCAQMD control.<sup>72</sup> NO<sub>x</sub> and VOCs are important precursors to ozone and PM<sub>2.5</sub> formation, and SO<sub>x</sub> along with directly emitted PM<sub>2.5</sub>, contribute to the region's PM<sub>2.5</sub> nonattainment challenges. This illustrates that actions at the local, State, and federal level are needed to ensure the region attains the federal ambient air quality standards.

The peak daily operational regional emissions for the proposed Project would not result in exceedance over the SCAQMD's significance thresholds. To provide additional context to the proposed Project emissions, SCAQMD's 2016 AQMP provides 162.4 tons per day (324,800 pounds) of VOCs, and 293.1 tons per day (586,200 pounds) of NO<sub>x</sub> emissions basin-wide for the baseline year of 2012.<sup>73</sup> Consumer products remain as high-emitting categories over time, with consumer products accounting 87 percent of total VOC inventory in 2012 to 91 percent in 2031. Conversely, the proposed Project would result in less than 0.01 percent of the emissions modeled in the AQMP.

Since SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by criteria pollutant emissions, a general description of the adverse health impacts resulting from

72 SCAQMD, Final 2016 AQMP, Table 3-1a, <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>. Accessed April 2021.

73 SCAQMD, Final 2016 AQMP, Figure 3-1, <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>. Accessed April 2021.

the pollutants at issue is the extent of what can be provided at this time. See above description of general adverse health impacts resulting from criteria pollutants (refer to subheading **Criteria Air Pollutants and Health Effects** of this section).

- Delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP?

As shown in **Table IV.B-9** above, regional construction emissions of NO<sub>x</sub> would result in potentially significant short-term air quality impacts without mitigation. As shown in **Table IV.B-10**, with implementation of **MM AQ-1**, the projected emissions from the proposed Project will not exceed the SCAQMD significance thresholds. As shown in **Table IV.B-12** above, localized construction emissions of PM<sub>2.5</sub> would result in potentially significant short-term air quality impacts without mitigation. As shown in **Table IV.B-13**, with implementation of **MM AQ-1**, the projected emissions from the proposed Project will not exceed the SCAQMD localized significance thresholds. Moreover, emissions of criteria pollutants would not exceed the regional construction, regional operational, or localized operational SCAQMD thresholds. Thus, the proposed Project would not exceed any of the State and federal air quality standards and result in less than significant health-related impacts with mitigation. The proposed Project would not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP and would therefore be consistent with this criterion.

- Will the project exceed the assumptions utilized in preparing the AQMP?

Determining whether the proposed Project exceeds the assumptions reflected in the AQMP involves the evaluation of three criteria: (1) consistency with the population, housing, and employment growth projections; (2) the inclusion of mitigation measures; and (3) the appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis of each of these three criteria.

- Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based?

With respect to the first criterion for determining consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2016–2040 RTP/SCS regarding population, housing, and employment growth. A project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment growth assumptions that were used in the development of the AQMP. In the case of the 2016 AQMP, SCAG's 2016–2040 RTP/SCS form the basis of the projections of air pollutant emissions.

As discussed in the Initial Study (see **Appendix I.1**) the proposed Project is expected to result in an increase of approximately 624 residents. According to the growth estimates from SCAG's 2016–2040 RTP/SCS,

which as stated above form the basis for the growth forecast of the AQMP, the City had an estimated population of 466,300 people in 2012 and is projected to have a population of 484,500 in 2040.<sup>74</sup> The addition of 624 people generated by the proposed Project would be approximately 3 percent of the SCAG's 2016–2040 population increase forecast for the City. Such levels of growth are consistent with the population forecasts for the subregion as adopted by SCAG. The proposed Project is also consistent with the types, intensity and patterns of land use envisioned for this region. Because SCAG's projections form the basis of the 2016 AQMP, it can be concluded that the proposed Project would be consistent with the demographic projections incorporated into the AQMP and is consistent with this criterion.

- Does the project include air quality mitigation measures?

Implementation of feasible measures reduce air quality impacts. Implementation of **MM AQ-1** would require the on-site construction equipment fleet to meet EPA Tier 4 Final standards for all off-road diesel-powered construction equipment greater than 50 horsepower (hp) and would require all construction equipment to be outfitted with BACT devices certified by CARB. As shown in **Table IV.B-10** and **Table IV.B-13** above, implementation of **MM AQ-1** would reduce construction emissions to be below SCAQMD's significance thresholds.

- To what extent is project development consistent with the AQMP land use policies?

The determination of AQMP consistency is primarily concerned with the long-term influence of the proposed Project on air quality in the Basin. The proposed Project would not have a significant long-term impact on the region's ability to meet State and federal air quality standards. The proposed Project would comply with all applicable SCAQMD rules and regulations and would implement feasible mitigation measures to reduce air pollutant concentrations to levels that are below State and federal ambient air quality standards. Thus, the proposed Project's long-term influence on air quality would be consistent with the goals and policies of the AQMP and is, therefore, considered consistent with this criterion.

### **Consistency with 2020 – 2045 RTP/SCS**

SCAG has prepared and adopted the 2020–2045 RTP/SCS,<sup>75</sup> which includes a SCS that addresses regional development and growth forecasts. The SCAG 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals, with a specific goal of achieving an 8 percent reduction in passenger vehicle GHG emissions on a per capita basis by 2020, 19 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005

74 SCAG, Demographics and Growth Forecast, [https://scag.ca.gov/sites/main/files/file-attachments/f2016rtppscs\\_demographicgrowthforecast.pdf?1606073557](https://scag.ca.gov/sites/main/files/file-attachments/f2016rtppscs_demographicgrowthforecast.pdf?1606073557). Accessed April 2021.

75 SCAG, Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Final Plan, <https://www.connectsocial.org/Pages/Connect-SoCal-Final-Plan.aspx>. Accessed April 2021.

level. Although the 2020–2045 RTP/SCS is not technically an air quality plan, consistency with the 2020–2045 RTP/SCS has air quality implications, including the reduction of VMT which reduces air quality emissions.

As discussed in the Initial Study (see **Appendix I.1**) the proposed Project is expected to result in an increase of approximately 624 residents. According to the growth estimates from SCAG’s 2020–2045 RTP/SCS, the City had an estimated population of 470,900 people in 2016 and is projected to have a population of 489,600 in 2045.<sup>76</sup> The addition of 624 people generated by the proposed Project would be approximately 3 percent of the SCAG’s 2020–2045 population increase forecast for the City.

As part of its vision, the 2020–2045 RTP/SCS includes Connect SoCal;<sup>77</sup> Connect SoCal charts a path toward a more mobile, sustainable and prosperous region by making connections between transportation networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal presents strategies and tools that are consistent with local jurisdictions’ land use policies and incorporate best practices for achieving the State-mandated reductions in GHG emissions at the regional level through reduced per-capita VMT. These strategies would also serve to reduce air quality emissions and identify how the SCAG region can implement Connect SoCal to achieve these reductions. SCAG works to support local jurisdictions and partnerships by identifying ways to implement the SCS in a way that fits the vision and needs of each local community.

The following Connect SoCal strategies are intended to be supportive of implementing the regional SCS and are applicable to the proposed Project:

- **Focus Growth Near Destinations & Mobility Options**
  - Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations.
  - Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods.
  - Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations).
- **Promote Diverse Housing Choices**

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76 SCAG, Demographics and Growth Forecast, [https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial\\_demographics-and-growth-forecast.pdf?1606001579](https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_demographics-and-growth-forecast.pdf?1606001579). Accessed April 2021.

77 SCAG, Connect SoCal, The 2020-2045 Regional Transportation Plan/Sustainable Community Strategy of the Southern California Association of Governments, <https://www.connectsocial.org/Pages/Connect-SoCal-Final-Plan.aspx>, Accessed April 2021.

- Preserve and rehabilitate affordable housing and prevent displacement.

The proposed Project would develop 226 residential units on a vacant lot located within an urbanized area of the City. Of the 226 units proposed, 11 of the townhouses would be affordable housing units. The Project Site is located within 0.5-mile of the major transit stop at Wardlow Road and Pacific Place; the LA Metro Blue Line (or A Line) Wardlow station. Moreover, Long Beach Transit (LBT) and LA Metro provide public transit services in the vicinity of the proposed Project Site. The nearest bus stop could be found east of the Project Site at southeast Magnolia Avenue and Wardlow Road, where LBT Route 181 operates. The proposed Project would include 5 acres of public open space that would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails. Additionally, the proposed Project would include bike parking consistent with the City's Bicycle Master Plan. As such, the proposed Project would develop an infill site within proximity to a major transit station thus reducing the number of solo vehicle trips. Moreover, the proposed Project would include affordable housing options and would not result in displacement of existing residences.

As such, the proposed Project would not conflict with the 2020–2045 RTP/SCS and impacts would be less than significant.

### ***Consistency with General Plan Air Quality Element***

The Air Quality Element of the City's General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. The Air Quality Element acknowledges the interrelationships among transportation and land use planning in meeting the City's air quality goals. The following goals and policies are applicable to the Project.

**Goal 6:** Minimize particulate emissions from the construction and operation of roads and buildings, from mobile sources, and from the transportation, handling and storage materials.

**Policy 6.1:** Control Dust. Further reduce particulate emissions from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses.

**Goal 7:** Reduce emissions through reduced energy consumption.

**Policy 7.1:** Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

As discussed previously, the proposed Project would comply with SCAQMD Rule 403 for fugitive dust. Rule 403 control requirements include measures to prevent the generation of visible dust plumes. Measures include, but are not limited to, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system or other control measures to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site, and maintaining effective cover over exposed areas. As shown in **Table IV.B-9** above, regional construction emissions of NO<sub>x</sub> would result in potentially significant short-term air quality impacts without mitigation. As shown in **Table IV.B-10**, with implementation of **MM AQ-1**, the projected emissions from the proposed Project will not exceed the SCAQMD significance thresholds. As shown in **Table IV.B-12** above, localized construction emissions of PM<sub>2.5</sub> would result in potentially significant short-term air quality impacts without mitigation. As shown in **Table IV.B-13**, with implementation of **MM AQ-1**, the projected emissions from the proposed Project will not exceed the SCAQMD localized significance thresholds.

The proposed Project would be required to comply with the most recent Title 24 standards and the CalGreen Code. In addition to complying with Title 24 and CALGreen, the proposed Project would provide means for indirect energy savings, such as permitting individual solar panels to be applied to the proposed residential uses. This would be installed in compliance with Title 24 Section 110.10, which includes mandatory regulations for solar-ready buildings and would not preclude the use of alternate energy sources. Moreover, consistent with Section 21.45.400 of the LBMC, the proposed Project would be required to meet the LEED® program at the certified level and comply with the City's green building program. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water and other resources more efficiently; and reducing the overall impact to the environment.

As such, the proposed Project would be consistent with the goals and policies in the General Plan's Air Quality Element.

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

### ***Construction Emissions***

According to the SCAQMD, individual construction projects that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. As shown in **Table IV.B-9** above, regional construction emissions of NO<sub>x</sub> would result in potentially significant short-term air quality impacts without mitigation. As shown in **Table IV.B-10**, with implementation of **MM AQ-1**, the projected emissions from

the proposed Project will not exceed the SCAQMD significance thresholds. As shown in **Table IV.B-12** above, localized construction emissions of PM<sub>2.5</sub> would result in potentially significant short-term air quality impacts without mitigation. As shown in **Table IV.B-13**, with implementation of **MM AQ-1**, the projected emissions from the proposed Project will not exceed the SCAQMD localized significance thresholds. With implementation of **MM AQ-1**, significant impacts from Project construction would be reduced to a less than significant level. In addition, the proposed Project and all related projects would be required to comply with all applicable regulatory measures mentioned above, including compliance with Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coating).

### ***Operational Emissions***

According to the SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants. As shown in **Table IV.B-11** and **Table IV.B-12** above, operational emissions from Project buildout would not exceed SCAQMD's threshold for all criteria pollutants. Therefore, criteria pollutant air emissions would not be cumulatively considerable. As such, the cumulative operational impacts from occupancy of the proposed residential units would be less than significant.

### **Threshold IV.AQ-3: Expose sensitive receptors to substantial pollutant concentrations?**

#### ***Construction***

Implementation of the proposed Project could expose sensitive receptors to elevated pollutant concentrations during construction related activities, specifically carcinogenic or toxic air contaminants as well as elevated air concentrations of NO<sub>x</sub>, CO, PM<sub>10</sub> and PM<sub>2.5</sub>. In terms of localized air quality impacts, **Table IV.B-11** above shows that construction of the proposed Project would have a potentially significant impact with regard to PM<sub>2.5</sub> emissions. However, with implementation of **MM AQ-1**, this potential significant impact would be reduced to a less than significant level.

#### **Construction On- and Off-site Emissions**

As mentioned previously, construction would include site clearing of existing vegetation, bioremediation to treat contaminated soil and subsurface material beneath the proposed residential area, grading and compaction of on-site earth materials, building construction, utility installation/street improvements, and architectural coating. Maximum emissions estimates of mitigated exhaust PM<sub>10</sub> were treated as a set of side-by-side elevated volume sources uniformly spaced within the construction site. Additionally, approximately 13,000 total haul truck trips (66 days) would take place during the grading phase, totaling

to a maximum of 197 haul truck trips per workday. A new access driveway would be created directly from Wardlow Road to avoid truck travel adjacent to the single-family residential uses along Golden Avenue.

**Appendix IV.B.2** shows the estimated range of cancer risk for the existing off-site residences surrounding the Project site. The single-family residential uses to the east along Golden Avenue would be the nearest to on- and off-site emissions and would be exposed to increased amount of DPM emissions than those single-family residential uses located to the south across Wardlow Road. The cancer risk for the off-site receptors would gradually decrease as their distance from the on- and off-site emissions increases from the Project site.

As shown in **Appendix IV.B.2**, the maximum cancer risk at the off-site residential uses from DPM emissions generated by diesel-vehicle haul trucks entering the Project site from Wardlow Road for residents are 6.7 in 10 million and would not exceed the SCAQMD suggested significance criteria of 10 per one million. As such, impacts related to on- and off-site emissions would be less than significant.

### ***Operation***

#### **Mobile Exposure Health Risks and Hazards**

While analyzing the impacts of the existing environment on the proposed project is not necessarily a CEQA issue, in an NOP comment letter, the SCAQMD requested that an analysis of the Project's adjacency to the freeway be performed. The requested analysis is set forth below.

The proposed Project building façades facing towards Wardlow Road would be nearest to traffic volumes and would be exposed to higher amounts of DPM emissions than those located further away from the road; the cancer risk and chronic hazard indices for the on-site receptors would gradually decrease as their distance from the freeway increases across the Project Site. The maximally exposed individual receptor (MEIR) is represented by the proposed use located closest from the nearest travel lane.

**Table IV.B-13: Estimated Inhalation Cancer Risk and Chronic Hazards** shows the estimated range of excess cancer risk and chronic hazard indices for future residents of the proposed Project. The buildings facing Wardlow Road would be nearest to traffic volumes and would be exposed to higher amounts of DPM emissions than those located further away from the road; the cancer risk and chronic hazard indices for the on-site receptors would gradually decrease as their distance from the freeway increases across the Project Site.

As shown in **Table IV.B-14**, the maximum cancer risk at the Project Site from DPM emissions generated by diesel-vehicle travel along the I-710, I-405 and Wardlow Road for residents and workers are 1.2 in one hundred thousand (or 12 per one million) and 8.4 in ten million (or 0.84 per one million), respectively. As

such, the cancer risk for residents at the Site would exceed the SCAQMD suggested significance criteria of 10 per one million. However, the cancer risk for workers at the Site would not exceed the SCAQMD suggested significance criteria of 10 per one million. Moreover, **Table IV.B-14** shows that the maximum noncancer hazard indices for residents and construction workers are 0.01 for the MEIR receptors, below the significance criterion of 1. Nevertheless, the impact from exposure to pollutants from I-710, I-405 and Wardlow Road are considered potentially significant because cancer risk for residents at the Site would exceed the SCAQMD suggested significance criteria. As discussed below, the proposed Project would include **Mitigation Measure MM AQ-2** to reduce cancer risk to on-site residents.

**Table IV.B-14**  
**Estimated Inhalation Cancer Risk and Chronic Hazards**

Receptor	Cancer Risk	Chronic Noncancer Hazard Index
Resident MEIR	1.2E-05	0.01
Worker MEIR	8.4E-07	0.01

*Note: Refer to **Appendix IV.B.2** for Health Risk Assessment Report.*

With respect to cancer risk, any nonzero concentration of a carcinogen represents an increased risk of developing cancer. It is important to note that the proposed features of the building include internal (no window units) filtration and climate control systems. In the event exterior cooling systems are utilized, in order to minimize adverse health effects associated with exposure of future Project sensitive receptors to DPM concentrations from the freeway and major roadway, **MM AQ-2** would incorporate the following design features to reduce potential cancer risk:

- Install, operate, and maintain an HVAC system that uses high-efficiency filters of Minimum Efficiency Reporting Value (MERV) 14 or higher for the residential units (suggested use of MERV 16);
- Locate the air intakes for the uses as far from the freeway as possible; and
- Provide a disclosure letter to all new residents that discusses the potential risk from living within close proximity of the freeway and roadway segment, and points out that opening windows reduces the effectiveness of implemented reduction measures and increases individuals' exposure and hence risk.

High-efficiency (MERV 14–16 or higher) pleated particle filters for uses located near busy roadways would generally be considered the most effective approach to filtration because these filters can remove the very small particles emitted by motor vehicles without emitting ozone, formaldehyde, or other harmful byproducts. Such high-efficiency filtration can reduce indoor PM<sub>2.5</sub> and ultrafine particle levels by up to 90 percent (MERV 16) relative to incoming outdoor levels when doors and windows are kept mostly closed.

However, only those particles in the airstream passing through the filter are removed. Consequently, because most occupants of the proposed Project are anticipated to open their windows or doors at least part of the day, any pollutant reduction attained through the use of high-efficiency filters would be compromised based on the amount of time doors and windows are left open. **Table IV.B-15: Reduced Estimated Inhalation Cancer Risk** identifies the reduction in risk associated with incorporation of MERV 14 through MERV 16 filters when windows are closed 25 percent, 50 percent, 75 percent, and 100 percent of the time. As shown in **Table IV.B-15**, the implementation of these measures with the windows open or closed will reduce risk exposure at the MEIR and result in SCAQMD suggested significance criteria of 10 per one million not being exceeded.

Limiting particulate infiltration will be accomplished by installing and maintaining air filtration systems with efficiencies of MERV 14 or better as defined by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers Standard 52.2. These filters are rated to remove a portion of the ultrafine and submicron particles, such as diesel particulate matter emitted from mobile sources. MERV 14 or better air filtration systems are capable of removing 75 percent or more of particles between 0.3 and 1.0 microns, and 90 percent or more of particles between 1.0 and 10.0 microns.

With installation of MERV 14 air filtration systems, PM<sub>10</sub> concentrations for the maximum exposed residential units would be 0.03 µg/m<sup>3</sup> and 0.02 µg/m<sup>3</sup> for the 24-hour and annual averaging times, respectively. These values would not exceed the 24-hour and annual significance thresholds of 2.5 µg/m<sup>3</sup> and 1.0 µg/m<sup>3</sup>, respectively. As such, impacts would be less than significant with mitigation incorporated.

**Table IV.B-15**  
**Reduced Estimated Inhalation Cancer Risk**

Receptor	MERV 14	MERV 15	MERV 16
<b>Windows closed 25 percent of the time</b>			
Resident MEIR	9.87E-06	9.76E-06	9.64E-06
<b>Windows closed 50 percent of the time</b>			
Resident MEIR	8.06E-06	7.83E-06	7.61E-06
<b>Windows closed 75 percent of the time</b>			
Resident MEIR	6.25E-06	5.91E-06	5.57E-06
<b>Windows closed 100 percent of the time</b>			
Resident MEIR	4.44E-06	3.99E-06	3.53E-06

*Note: Refer to **Appendix IV.B.2** for Health Risk Assessment Report.*

**Threshold IV.AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

As shown in **Table IV.B-12** above, localized construction and operational emissions of the proposed Project would result in emissions below the localized significance thresholds with the exception of PM<sub>2.5</sub> emissions during construction. However, as shown in **Table IV.B-13**, localized PM<sub>2.5</sub> construction emissions would be below the SCAQMD threshold with mitigation. Mandatory compliance with SCAQMD Rule 1113 would limit the number of VOCs in architectural coatings and solvents. According to the SCAQMD, while almost any source may emit objectionable odors, some land uses are more likely to produce odors because of their operation. Land uses more likely to produce odors include agriculture, chemical plants, composting operations, dairies, fiberglass molding manufacturing, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants. The proposed Project does not contain any active manufacturing activities and would not convert current agricultural land to residential land uses. Objectionable odors would not be emitted by the residential uses.

Any unforeseen odors generated by the proposed Project will be controlled in accordance with SCAQMD Rule 402 which prohibits the discharge of air contaminants that harm, endanger, or annoy individuals or the public; endanger the comfort, health or safety of individuals or the public; or cause injury or damage to business or property. Failure to comply with Rule 402 could subject the offending facility to possible fines and/or operational limitations in an approved odor control or odor abatement plan. Therefore, the proposed Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Impacts associated with objectionable odors would be less than significant.

## **7. CUMULATIVE IMPACTS**

There are two identified related projects located within the vicinity of the proposed Project. These related projects include a proposed self-storage facility located at 3701 Pacific Place, and a proposed office building located 3435 Long Beach Boulevard. The closest related project would be the proposed storage facility which would be located approximately 400 feet north of the Project Site, across Interstate 405. Though the buildout years of these related projects are uncertain and may be beyond the buildout year of the Project, they were considered as part of the proposed Project's impact analysis and conservatively assumed to be completed by the proposed Project buildout year, regardless of the actual buildout date. The proposed Project and the related projects would be required to comply with all CARB and SCAQMD rules for construction and operation and the compliance with these rules is incorporated into the analyses below.

## Construction

With respect to the Project construction air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies (e.g., SCAQMD Rule 403) to reduce criteria pollutant emissions outlined in the AQMP pursuant to NAAQS. As such, the proposed Project would comply with SCAQMD Rule 403 requirements and implement all feasible mitigation measures. In addition, the proposed Project would comply with adopted AQMP emissions control measures as described below. Per SCAQMD rules and mandates as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., SCAQMD Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects Basin-wide, where applicable.

According to the SCAQMD, individual development projects that exceed the SCAQMD-recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. As shown in **Table IV.B-9** above, regional construction emissions of NO<sub>x</sub> would result in potentially significant short-term air quality impacts without mitigation. As shown in **Table IV.B-10** above, regional construction-related daily emissions at the Project Site would not exceed SCAQMD's significance thresholds for any criteria pollutant with implementation of **MM AQ-1**. As such, regional construction cumulative impacts would be less than significant with mitigation.

In terms of localized ambient air quality standards, construction of the proposed Project is forecasted to result in air emissions of PM<sub>2.5</sub> that would exceed the SCAQMD construction LST standards. Consequently, the proposed Project would have a cumulative health impact prior to mitigation. All other criteria air pollutant emissions would fall below the SCAQMD's construction ambient air quality standards and cumulative health impacts would be less than significant. Incorporation of **MM AQ-1** would reduce the PM<sub>2.5</sub> emissions from construction of the proposed Project below SCAQMD ambient air quality standards. Thus, the proposed Project's contribution to cumulative impacts would not be considerable and cumulative construction impacts would be less than significant with mitigation.

## Operational

According to the SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants.

As shown in **Table IV.B-11** and **Table IV.B-12** above, daily operational emissions would not exceed the SCAQMD significance thresholds for criteria pollutants without mitigation. Thus, Project operations would

not have a significant cumulative air quality impact due to criteria pollutant emissions without the incorporation of mitigation measures and cumulative impacts would be less than significant.

As shown in **Table IV.B-14**, the maximum cancer risk at the Project Site from DPM emissions generated by diesel-vehicle travel along the I-710, I-405 and Wardlow Road for residents and workers are 1.2 in one hundred thousand and 8.4 in ten million, respectively. The cancer risk for residents at the Site would exceed SCAQMD's suggested significance criteria of 10 per one million. However, the maximum noncancer hazard indices for the proposed Project's residents and workers are 0.01 for the MEIR receptors, below the significance criterion of 1. Implementation of **MM AQ-2** would reduce cancer risk for residents at the Site to below the SCAQMD's suggested significance criteria of 10 per one million. Thus, the proposed Project's contribution to cumulative impacts would not be considerable and cumulative health impacts would be less than significant with mitigation.

With respect to potential operational odor impacts, neither the proposed Project nor the related projects have a high potential to generate odor impacts. Furthermore, any related project that may have a potential to generate objectionable odors would be required by SCAQMD Rule 402 (Nuisance) to implement BACT to limit potential objectionable odor impacts to a less than significant level. Thus, potential cumulative odor impacts from related projects would be less than significant.

## 8. MITIGATION MEASURES

### **MM AQ-1 Construction Emissions**

Construction contractors shall, at a minimum, use equipment that meets the USEPA's Final Tier 4 emissions standards for off-road diesel-powered construction equipment with 50 horsepower (hp) or greater, for all phases of construction activity, unless it can be demonstrated to the City with substantial evidence that such equipment is not available. To ensure that Final Tier 4 construction equipment or better shall be used during the proposed Project's construction, the City shall include this requirement in applicable bid documents, purchase orders, and contracts. The City shall also require periodic reporting and provision of written construction documents by construction contractor(s) and conduct regular inspections to the maximum extent feasible to ensure and enforce compliance.

Where Final Tier 4 equipment is not available, the Project shall use Tier 3 equipment outfitted with Best Available Control Technology devices including a CARB certified Level 3 Diesel Particulate Filter (DPF). Level 3 DPF's are capable of achieving at least 85 percent reduction in particulate matter emissions. Any emissions control device used by the

contractor shall achieve emissions reductions that are no less than what could be achieved by Final Tier 4 emissions standards for a similarly sized engine, as defined by the CARB's regulations. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground disturbing and construction activities. The Project representative will make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, which will be used during construction. The inventory will include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be maintained on site at the time of mobilization for each applicable piece of construction equipment.

#### **MM AQ-2 On-Site Health Risks**

The proposed Project shall incorporate the following design features to reduce potential cancer risk:

- Install, operate, and maintain an HVAC system that uses high-efficiency filters of MERV 14 or higher for the residential units (suggested use of MERV 16);
- Locate the air intakes for the uses as far from the freeway as possible; and
- Provide a disclosure letter to all new residents that discusses the potential risk from living within close proximity of the freeway and roadway segment, and points out that opening windows reduces the effectiveness of implemented reduction measures and increases individuals' exposure and hence risk.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

As shown in **Table IV.B-9** above, regional construction emissions of NO<sub>x</sub> would result in potentially significant short-term air quality impacts without mitigation. As shown in **Table IV.B-10** above, regional construction-related daily emissions at the Project Site would not exceed SCAQMD's significance thresholds for any criteria pollutant with implementation of **MM AQ-1**. Therefore, regional construction would result in a less than significant short-term air quality impact during construction with mitigation.

As shown in **Table IV.B-12**, maximum daily localized emissions would exceed the SCAQMD LST for PM<sub>2.5</sub> during periods of heavy construction prior to mitigation. The emission levels in **Table IV.B-13** represent the maximum daily emissions projected to occur with implementation of **MM AQ-1**. As presented in **Table IV.B-13**, the mitigated daily maximum localized construction emissions would not exceed any of the SCAQMD LST's. Therefore, localized construction would result in a less than significant short-term air quality impact during construction with mitigation.

As shown in **Table IV.B-14**, the maximum cancer risk at the Project Site from DPM emissions generated by diesel-vehicle travel along the I-710, I-405 and Wardlow Road for residents and workers are 1.2 in one hundred thousand (or 12 per one million) and 8.4 in ten million (or 0.84 per one million), respectively. The cancer risk for the proposed residents at the Site would exceed SCAQMD's suggested significance criteria of 10 per one million. Implementation of **MM AQ-2** would reduce cancer risk for residents at the Site to below the SCAQMD's suggested significance criteria of 10 per one million. Therefore, maximum cancer risk for residents at the Site would result in a less than significant impact during operation with mitigation.

## IV.C BIOLOGICAL RESOURCES

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### 1. INTRODUCTION

This section of the Draft EIR provides a discussion of existing biological resources, applicable laws, and regulations associated with biological resources, and an analysis of the potential effects resulting from implementation of the proposed Project. Information contained in this section is based on **Appendix IV.C.1: Biological Resources Constraints Analysis**, prepared by Biological Assessment Services, dated May 19, 2020; the **Appendix IV.C.2: Biological Resources Technical Report**, prepared by Biological Assessment Services, dated April 2021; and **Appendix IV.C.3: Biological Resources Supplemental Survey**, prepared by Biological Assessment, dated November 15, 2021.

### 2. ENVIRONMENTAL SETTING

#### Regional Site Setting

The Project Site is regionally located in the City of Long Beach (City), Los Angeles County, California. The City lies on the coastal plain of the Los Angeles Basin, and is bordered on the northwest by the City of Los Angeles and on the southeast by Orange County. The regional climate within the basin is Mediterranean, characterized by warm summers, mild winters, infrequent seasonal rain fall, and year-round average temperature ranging from a cold season low of 46°F to a warm season high of 83°F. Average annual precipitation in the region is approximately 12 inches, with most of the annual precipitation occurring between the months of December and March.

#### Project Site Setting

The 20-acre Project Site is located in the coastal plain of Los Angeles County and was historically a part of the Los Angeles River (LA River) floodplain. Following channelization of the LA River, the Project Site is no longer subject to river flooding and meandering. Construction of Interstate 405 (I-405) and surrounding residential development has resulted in the Project Site becoming completely surrounded by urban development and infrastructure. A wastewater treatment facility was constructed on the Site in the 1920s to treat oil production water. The facility was in full operation until approximately the 1980s when it was shut down and subsequently removed in the early 2000s. Due to previous usage as a water treatment facility for oil production water, the Project Site contains petroleum contaminated soil which requires bioremediation for contamination removal. Bioremediation on site has been ongoing since the early 2000s and the Site is regularly tilled and frequently disturbed by bioremediation activities. Remnants of the oil facilities remaining on site include old foundations, abandoned roads, and pipes.

A preliminary biological survey of the Project Site was conducted in May 2020, and a subsequent survey was conducted in April 2021, both included on the ground field surveys. The following discussion provides details regarding existing biological resources recorded on the Project Site.

## Soil Types

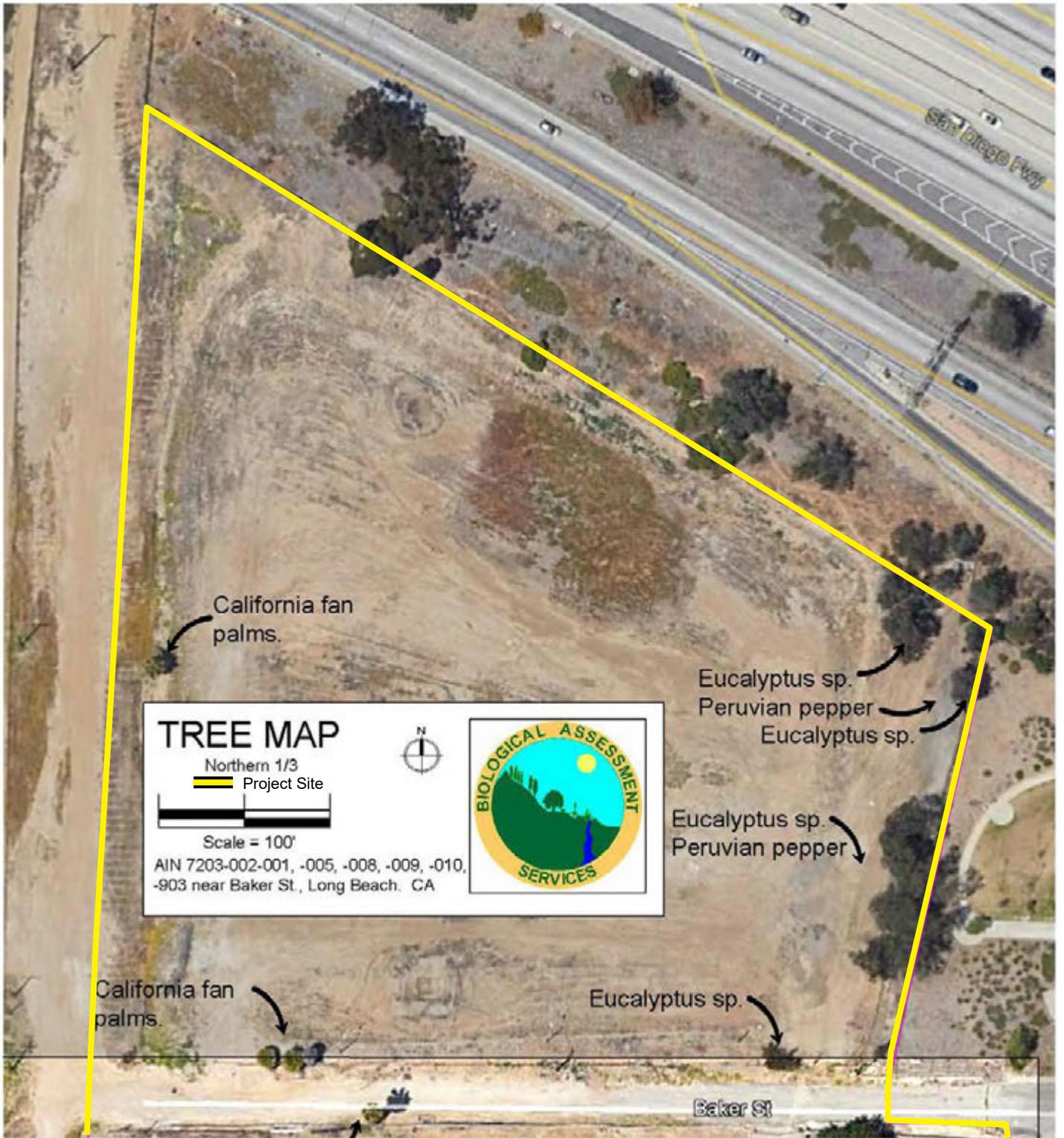
Soil types on the Project Site consist of 1001—Urban land-Metz-Pico complex, 0 to 2 percent slopes and 1131—Urban land-Typic Xerorthents, coarse substratum-Typic Haploxeralfs complex, 0 to 5 percent slopes. They are generally described as “Discontinuous human-transported material over mixed alluvium.” This indicates that little native soil is present and that few plants or ground dwelling animals would remain from pre-development conditions.

## Vegetation

Because of the long history of site disturbance and current practice of regular tilling, the Project Site is completely dominated by nonnative, ruderal plant species, with a few native plants, representing eight species, observed at the time of the surveys. Native plants identified on the Project Site were blue elderberry (*Sambucus nigra*), mulefat (*Baccharis salicifolia*), white-flowered nightshade (*Solanum douglasii*), saltwort (*Salicornia* sp.), telegraph weed (*Heterotheca grandiflora*), annual cudweed (*Pseudognaphalium stramineum*), small-flowered fiddleneck (*Amsinckia menziesii*), and Jimsonweed (*Datura stramonium*). Most of these species were represented by a single plant, with a few represented by several individual plants. While Southern Tarplant (*Centromadia parryi*) is known to occur in the area, thorough surveys, conducted at different times of year, did not locate any specimens of this species.

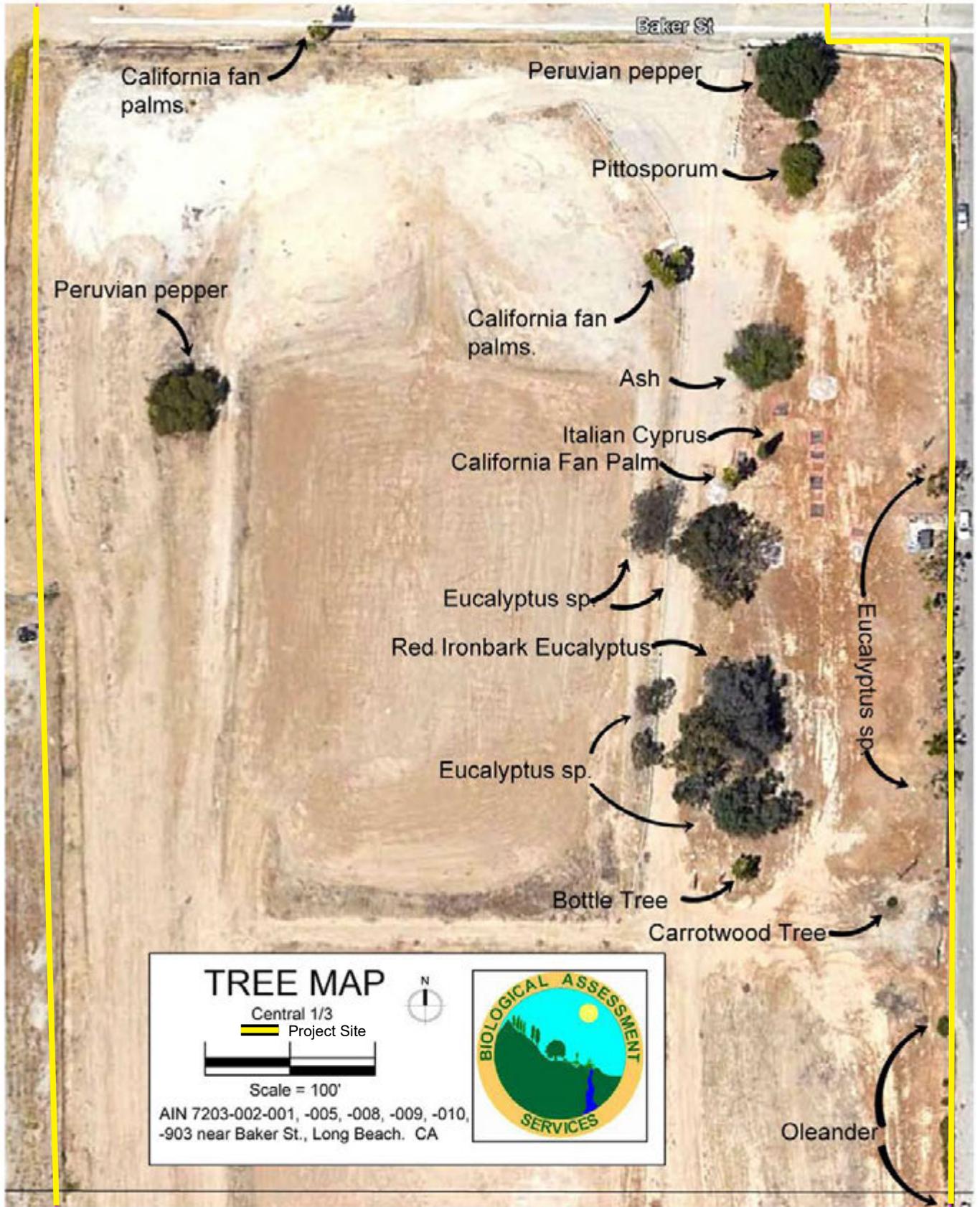
Trees present on the property are likely remnants of landscaping from previous uses, including several eucalyptus species (*Eucalyptus* sp.). The dominant eucalyptus species is lemon sweet gum. Other species of eucalyptus present include red ironbark, and may include other species. Over 700 species belong in the *Eucalyptus* genus and all are from the Australian area and are nonnative in north America. Other trees present include Peruvian pepper (*Schinus molle*), Brazilian pepper (*Schinus teribenthifolia*), California fan palm (*Washingtonia filifera*), Canary Island palm (*Phoenix canaryensis*), carrotwood (*Cupaniopsis anacardioides*) and bottle tree (*Brachychiton rupestris*). All tree species on site are nonnative. **Figures IV.C-1: Tree Location Map** illustrate the positions of the existing trees on the Project Site.

The remainder of the plants found on the Project Site consist of nonnative ruderal species including several grasses such as fountain grass (*Pennisetum setaceum*), hare barley (*Hordeum leporinum*), red brome and ripgut brome (*Bromus maditensis rubens*, *B. diandrus*). Several mustards were noted including London rocket (*Sisymbrium irio*) and wild radish (*Raphanus sativus*). Among the remaining nonnative ruderal species noted were redstem filaree and storksbill (*Erodium cicutarium*, *E. botrys*), dwarf nettle (*Urtica urens*), yellow sweetclover (*Melilotus indicus*), cheeseweed (*Malva parviflora*), Russian thistle (*Salsola kali*), flax-leaved fleabane (*Erigeron bonariensis*), brass-buttons (*Cotula australis*), five-hook bassia (*Bassia hysopifolia*), prickly lettuce (*Lactuca serriola*), milk thistle (*Silybum marianum*), crown daisy (*Chrysanthemum coronarium*), and tree tobacco (*Nicotiana glauca*).



SOURCE: Biological Assessment Services, Biological Resources Technical Report - April 2021

FIGURE IV.C-1a



SOURCE: Biological Assessment Services, Biological Resources Technical Report - April 2021

FIGURE IV.C-1b



SOURCE: Biological Assessment Services, Biological Resources Technical Report - April 2021

FIGURE IV.C-1c

Many of the species present are halophytes or salt-tolerant plants, indicating that the soils on site may have originated as dredge materials from the LA River channel when the area was tidally influenced area and salt-water intrusion was occurring. These species include, but are not limited to, Coulter's goldfields (*Lasthenia glabrata* ssp. *Coulteri*), beach spectaclepod (*Dithyrea maritima*), estuary seablite (*Suaeda esteroa*), and woolly seablite (*Suaeda taxifolia*). A few others are commonly associated with standing water or stream courses. This may be because years of oil industry operation has resulted in a relatively impermeable layer of soil that retains surface water, allowing those water dependent species to survive.

### ***Wildlife***

The relatively barren nature of the Project Site has resulted in relatively few wildlife observations. Western fence lizard was the only reptile noted during the survey. Sign (tracks, scat, burrows, etc.) of several mammal species were noted on the Project Site, but the only mammals directly observed were the California ground squirrel (*Otospermophilus beecheyi*) and Audubon's cottontail (*Sylvilagus audubonii*). Any of the common mammal species found in the suburban areas of southern California may utilize or traverse the Project Site on occasion, including numerous rodent species, raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), and coyote (*Canus latrans*).

Sixteen bird species were observed on the Project Site at the time of the surveys, including three nonnative species: Rock dove, house sparrow, and European starling. Native species observed were Audubon's warbler, house finch, black phoebe, mourning dove, Anna's hummingbird, Allen's hummingbird, American kestrel, western meadowlark, California towhee, common raven, and killdeer. Cliff swallows foraged overhead. The meadowlarks were present in large migratory flocks and are not likely to nest or reside on the Project Site due to the lack of suitable habitat. The remaining species are local breeders and may nest on site. There were many killdeer present and many of these exhibited typical nesting behavior, feigning injury, and acting as decoys to lure a predator away from the nest. Several showed great fidelity to one spot, indicating the likely presence of a nest. To avoid nest disturbance, these areas were not approached. There are undoubtedly other avian species that utilize the Project Site as residents or transients, among the most common of which are likely, are the northern mockingbird, American crow, and bush tit. A northern harrier flew along the LA River berm just off site, but is likely to occasionally forage on site.

### ***Sensitive Biological Resources***

Most of the species listed as protected and occurring in the region have very specific habitat types that do not, and never did, occur on the Project Site, such as marine aquatic, coastal salt marsh, or vernal pool. As such, these have been eliminated from further consideration. Several protected bird species, such as golden and bald eagles, peregrine falcons, or bank swallows, may fly over the Project Site but would never reside there.

### 3. REGULATORY SETTING

#### ***Federal Endangered Species Act***

The Federal Endangered Species Act (FESA) of 1973, as amended (16 U.S.C. 1531 et seq.), provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under FESA. FESA has four major components: (1) provisions for listing species; (2) requirements for consultation with the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service; (3) prohibitions against “taking” of listed species; and (4) provisions for permits that allow an incidental “take.”<sup>1</sup> FESA also discusses recovery plans and the designation of critical habitat for listed species. Both the USFWS and the National Marine Fisheries Service share the responsibility for administration of FESA. During the CEQA review process, each agency is given the opportunity to comment on the potential of a project to affect listed plants and animals.

FESA is implemented by USFWS through a program that identifies and provides for protection of various species of fish, wildlife, and plants deemed to be in danger of or threatened with extinction. As part of this regulatory act, FESA provides for designation of critical habitat, defined in FESA Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features “essential to the conservation of the species” are found and that “may require special management considerations or protection.” Critical habitat may also include areas outside the current geographical area occupied by the species that are nonetheless “essential for the conservation of the species.”

FESA also discusses recovery plans and the designation of critical habitat for listed species. Both the USFWS and the National Marine Fisheries Service share the responsibility for administration of FESA. During the CEQA review process, each agency is given the opportunity to comment on the potential of a project’s impacts to listed plants and animals and to ensure adequate protection of listed species that may be affected by the Project.

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1 The California Endangered Species Act defined the term “take” as follows: “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill, Fish & Game Code, §86.” Federal Endangered Species Act defines a “take” as follows: “Harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C., §1532 (19).

## ***Migratory Bird Treaty Act***

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA). The federal MBTA<sup>2</sup> prohibits any person unless permitted by regulations, to:

*Pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any part, nest, or egg of any such bird.*

The list of migratory birds protected by the MBTA includes nearly all bird species native to the U.S. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. Thus, it is illegal under the MBTA to take (including killing, capturing, selling, trading, and transport) protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service.<sup>3</sup> Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA. While destruction of a nest by itself is not prohibited under the MBTA, nest destruction that results in the unpermitted take of migratory birds or their eggs, is illegal and fully prosecutable under the MBTA.

With respect to nesting birds, although the MBTA does not itself provide specific take avoidance measures, the USFWS and the California Department of Fish and Wildlife (CDFW), over time, have developed a set of measures sufficient to demonstrate take avoidance, included during construction activities, which include conducting brush removal, tree trimming, building demolition and/or construction, or grading activities outside of the nesting season. CDFW biologists have defined the nesting season is February 15 through August 31 (January 15 to August 31 for raptors). If other timing restrictions make it impossible to avoid the nesting season, prior to issuance of a grading, construction or building permit including demolition permit, the following measures are required as described below:

- Vegetation removal activities shall be scheduled outside the nesting season (September 1 to February 14 for songbirds; September 1 to January 14 for raptors) to avoid potential impacts to nesting birds. This includes vegetation removal associated with on-going fuel modification activities.
- Any construction activities or fuel modification activities that occur during the nesting season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors) shall require that all

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<sup>2</sup> 16 U.S.C Sections 703 et seq.; title 50 C.F.R. Part 10.

<sup>3</sup> United States Fish and Wildlife Service (USFWS), Migratory Bird Treaty Act, <https://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php>. Accessed May 2021.

suitable habitats be thoroughly surveyed for the presence or absence of nesting birds by a qualified biologist monitor (i.e., a professional biologist with a minimum of two years of avian survey experience or equivalent) before the commencement of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors), or as determined appropriate by the qualified biologist monitor, shall be delineated, flagged, and avoided until the nesting cycle is complete as determined by the qualified biologist monitor.

### ***Marine Mammal Protection Act***

The Marine Mammal Protection Act of 1972, and as amended, establishes federal responsibility for the protection and conservation of marine mammal species by prohibiting the harassment, hunting, capture, or killing of any marine mammal. The primary authority for implementing the act belongs to the United States Fish and Wildlife Service and National Marine Fisheries Service.<sup>4</sup>

### ***Federal Noxious Weed Act***

Federal Noxious Weed Act - Public Law 93-629 (7 U.S.C. 2801 et seq.; 88 Stat. 2148), enacted January 3, 1975, established a Federal program to control the spread of noxious weeds. The Secretary of Agriculture was given the authority to designate plants as noxious weeds by regulation, and the movement of all such weeds in interstate or foreign commerce was prohibited except under permit. The Secretary was also given authority to inspect, seize and destroy products, and to quarantine areas if necessary to prevent the spread of such weeds. The Secretary was also authorized to cooperate with other Federal, State, and local agencies, farmers associations and private individuals in measures to control, eradicate, or prevent or retard the spread of such weeds.<sup>5</sup>

### ***Fish and Wildlife Coordination Act***

The Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) requires that federal agencies consult with the USFWS, the National Marine Fisheries Service and State wildlife agencies for activities that affect, control, or modify waters of any stream or bodies of water, in order to minimize the adverse impacts of such actions on fish and wildlife resources and habitat. This consultation is generally incorporated into the process of complying with Section 404 of the Clean Water Act, NEPA or other federal permit, license, or review requirements.

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4 USFWS, Marine Mammal Protection Act, <https://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/marine-mammal-protection-act.html>. Accessed May 2021.

5 7 U.S.C. 2801 et seq.; 88 Stat. 2148.

### ***California Endangered Species Act***

Under the California Endangered Species Act, CDFW is responsible for maintaining a list of threatened and endangered species (California Department of Fish and Game Code, Section 2070).<sup>6</sup> The CDFW also maintains a list of candidate species, which are species formally under review for addition to either the list of endangered species or the list of threatened species.

The California Endangered Species Act prohibits the take of plant and animal species that the California Fish and Game Commission has designated as either threatened, rare, or endangered in California. “Take” in the context of this regulation means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill a listed species (California Fish and Game Code, Sections 86 and 2080). The take prohibitions also apply to candidates for listing under the California Endangered Species Act. However, Section 2081 of the act allows the department to issue permits for the minor and incidental take of species by an individual or permitted activity listed under the act.

In accordance with the requirements of the California Endangered Species Act, an agency reviewing a project within its jurisdiction must determine if any State-listed endangered, rare, threatened or candidate species could be present in the Project area. The agency also must determine if the Project could have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any project that could affect any State-listed endangered, rare, threatened or candidate species.

### ***California Migratory Bird Protection Act***

Assembly Bill 454 (AB 454), the California Migratory Bird Protection Act, which expires on January 20, 2025, makes it unlawful the taking or possession of any migratory nongame bird designated in the federal act before January 1, 2017, any additional migratory nongame bird that may be designated in the federal act after that date, or any part of those migratory nongame birds, except as provided by rules and regulations adopted by the United States Secretary of the Interior under the federal act before January 1, 2017, or subsequent rules or regulations adopted pursuant to the federal act, unless those rules or regulations are inconsistent with the Fish and Game Code.

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6 The commission shall establish a list of endangered species and a list of threatened species. The commission shall add or remove species from either list if it finds, upon the receipt of sufficient scientific information pursuant to this article, and based solely upon the best available scientific information, that the action is warranted. (Amended by Stats. 2018, Ch. 329, Sec. 4. (SB 473) Effective January 1, 2019.).

AB 454, also reenacted, operative January 20, 2025, the existing provisions of law regarding the taking or possession of any migratory nongame bird as designated in the federal act, or any part of such migratory nongame bird, except as specified.

### ***California Fish and Game Code Fish and Wildlife Code Sections 3503 & 3513***

According to Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*)). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered a “take” by the CDFW. The same procedures identified above to avoid a violation of the federal MBTA are recognized by the CDFW to avoid a take in violation of these provisions.

### ***California Fish and Game Code Sections 1900–1913 – Rare and Endangered Plants***

California Fish and Game Code Sections 1900–1913<sup>7</sup> were developed to preserve, protect, and enhance Rare and Endangered plants in the State. The act requires all State agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

### ***California Native Plant Society***

The California Native Plant Society (CNPS) maintains a list of special status plant species based on collected scientific information. Designation of these species by CNPS has no legal status or protection under federal or State endangered species legislation. CNPS designations are defined as List 1A (plants presumed extinct); List 1B (plants rare, threatened, or endangered in California and elsewhere); List 2 (plants rare, threatened, or endangered in California, but more numerous elsewhere); List 3 (plants about which more information is needed – a review list); and List 4 (plants of limited distribution - a watch list). In general, plants appearing on CNPS List 1A, 1B, or 2 meet the criteria of Section 15380 of the CEQA Guidelines; thus, substantial adverse effects to these species would be considered significant. Additionally, plants constituting CNPS List 1A, 1B, or 2 meet the definitions of California Department Fish and Game Code, Section 1901 (Native Plant Protection Act), or Sections 2062 and 2067 (California Endangered Species Act).

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7 California Fish and Game Code, Fish and Game Code (FGC), Division 2, Department of Fish and Wildlife, (700-1940), Chapter 10, Sections 1900-1913, Native Plant protection.

### **California Fish and Game Code Section 1600**

Under sections 1600 et. seq. of California Fish and Game Code, the CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife and requires a Streambed Alteration Agreement for such activities. The CDFW issues a Streambed Alteration Agreement with any necessary mitigation to ensure protection of the State's fish and wildlife resources. The CDFW has jurisdiction over riparian habitats associated with watercourses.

### **Sensitive Vegetation Communities**

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, State, and local conservation plans, policies, or regulations. The CDFW ranks such vegetation communities as "threatened" or "very threatened" and keeps records of their occurrences in the California Natural Diversity Database (CNDDDB). Sensitive vegetation communities are also identified by the CDFW on its List of California Natural Communities Recognized by the CNDDDB. Impacts to these vegetation communities and habitats identified in local or regional plans, policies, regulations, or by federal or State agencies, must be considered and evaluated under CEQA.<sup>8</sup>

### **City of Long Beach General Plan**

The Conservation Element of the City's General Plan was adopted in 1973, and acts as a guideline for promoting policies, standards, and programs essential for the economic and environmental well-being of the City.<sup>9</sup> The Conservation Element provides an important part of the background material needed in the preparation of a program directed toward the wise management of resources and the development plan for the allocation of land uses. The following goals and policies are applicable to the proposed Project.

- Promote measures and plans which protect and preserve distinctive types of vegetation including mammals, birds, marine organisms, and especially endangered species.
- Provide controls for land supporting distinctive native vegetation, wildlife species which can be used for ecologic, scientific, and educational purposes.
- Locate, define, and protect other beneficial natural habitats in and about the City.

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<sup>8</sup> CDFW, Natural Communities, <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities>. Accessed May 2021.

<sup>9</sup> City of Long Beach, General Plan, Conservation Element, <http://www.longbeach.gov/lbds/planning/advance/general-plan/>. Accessed May 2021.

The Open Space and Recreation Element of the City's General Plan was adopted in October 2002 and addresses the requirements of open space planning, with a special emphasis on planning for public recreation.<sup>10</sup> The Open Space and Recreation emphasizes the policy plan and implementation measures which are directed to addressing the community's primary open space and recreation issues. The following goal and policy are applicable to the proposed Project.

**Goal 1.5:** Remediate contaminated sites.

**Policy 1.4:** Promote and assist with the remediation of contaminated sites.

### ***City of Long Beach Tree Ordinance***

Trees occurring within the City along City streets or on other City property are afforded protection under Ordinance C-7642 and Section 14.28 of the Long Beach Municipal Code (LBMC), and through the City's Tree Maintenance Policy. The purpose of these regulations is to preserve and protect the community's urban forest and to promote the health and safety of City trees, from the time they are planted through maturity. The Project Site does not include any City-owned property; and for this reason, does not contain trees protected.

## **4. ENVIRONMENTAL IMPACTS**

### ***Thresholds of Significance***

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to biological resources if it would:

**Threshold 4. BIO-1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

**Threshold 4. BIO-2:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

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<sup>10</sup> City of Long Beach, General Plan, Open Space and Recreation, <https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/open-space-and-recreation-element>. Accessed May 2021.

## 5. Methodology

As discussed previously, a preliminary biological survey of the Project Site was conducted in May 2020 and a subsequent survey was conducted in April 2021. These surveys were conducted to determine the general biological character of the Project Site and determine the potential for any significant impacts to biological resources present on the Project Site. The Project Site was walked on-foot by utilizing existing trails. The entire Project Site was easily accessible and easily viewed from many vantage points. A few areas were surveyed by binoculars and spotting scope, only to avoid disturbing nesting birds present on site. The path chosen was intended to quickly evaluate the most common species present on the Project Site, and then to discover additional species that were located in portions of the Project Site that appeared to support more unique flora. The sky was clear and the weather mild, with temperature steady at around 73°F during the 2021 survey.

The surveys include record searches of the California Natural Diversity Database and the California Native Plant Society's lists of sensitive plants were accessed for the nine United States Geological Survey (USGS) quadrangle maps surrounding the Project Site. Information from the biological reports is used to determine the number and types of biological resources on site, and to determine the potential impact to these biological resources after project implementation.

## 6. Project Impacts

**Threshold 4.BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Special status species include those listed as endangered or threatened under the federal Endangered Species Act or California Endangered Species Act; species otherwise given certain designations by the CDFW; and plant species listed as rare by the California Native Plant Society.

No species listed as Rare, Threatened, or Endangered by the State or federal governments were identified on the Project Site. Moreover, species listed as protected are not likely to occur on the Project Site as the species listed as protected and occurring in the region have very specific habitat types that do not, and never did, occur on the Project Site, such as marine aquatic, coastal salt marsh, or vernal pool.

There are 124 biological resources listed as sensitive and reported in the 9-quad area (approximately 582 square miles) surrounding the Project Site. Of these, 23 are listed as threatened or endangered and three others, the golden eagle, peregrine falcon, and California brown pelican, remain fully protected after being delisted as shown in **Table IV.C-1: Sensitive Species Evaluation**.

**Table IV.C-1  
Sensitive Species Evaluation**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Presence Onsite</b>
<b><i>Invertebrates</i></b>				
Streptocephalus woottoni	Riverside fairy shrimp	Endangered	None	N - No water habitat available
Bombus crotchii	Crotch bumble bee	None	Candidate Endangered	N - No longer a candidate for listing
Euphilotes battoides allyni	El Segundo blue butterfly	Endangered	None	N - No foodplant on site
Glaucopsyche lygdamus palosverdesensis	Palos Verdes blue butterfly	Endangered	None	N - No foodplant on site
<b><i>Fish</i></b>				
Siphateles bicolor mohavensis	Mohave tui chub	Endangered	Endangered	N - No water habitat available
Eucyclogobius newberryi	tidewater goby	Endangered	None	N - No water habitat available
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Endangered	None	N - No water habitat available
<b><i>Birds</i></b>				
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	T - May fly overhead
Charadrius alexandrinus nivosus	western snowy plover	Threat.	None	N - No beach habitat
Coccyzus americanus occidentalis	western, yellow-billed cuckoo	Threat.	Endangered	N - No riparian habitat available
Phoebastria albatrus	short-tailed albatross	Endangered	None	N - No pelagic, marine, coastal or open water habitat
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	N - No cliff faces or outcrops
Riparia	bank swallow	None	Endangered	N - No nesting opportunities on site
Agelaius tricolor	tricolored blackbird	None	Threatened	N - No riparian habitat available
Sternula antillarum browni	California least tern	Endangered	Endangered	N - No pelagic, marine, coastal or open water habitat
Passerculus sandwichensis beldingi	Belding's savannah sparrow	None	Endangered	N - No saltmarsh habitat on site
Pelecanus occidentalis californicus	California brown pelican	Delisted	Delisted	N - No pelagic, marine, coastal or open water habitat
Polioptila californica	coastal California gnatcatcher	Threat.	None	N - No coastal sage scrub habitat
Rallus obsoletus levipes	light-footed Ridgway's rail	Endangered	Endangered	N - No riparian habitat available
Empidonax traillii	willow flycatcher	None	Endangered	N - No riparian habitat available
Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered	N - No riparian habitat available

Scientific Name	Common Name	Federal Status	State Status	Presence Onsite
<b>Mammals</b>				
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	Endangered	None	N - May have inhabited site prior to river channelization and oil development. Site too degraded to support the species now.
<b>Plants</b>				
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta	Endangered	Endangered	N - No thin soils in coastal sage scrub or chaparral habitat available
<i>Dithyrea maritima</i>	beach spectaclepod	None	Threatened	N - No beach habitat available
<i>Chloropyron maritimum ssp. maritimum</i>	salt marsh bird's-beak	Endangered	Endangered	N - No salt marsh habitat present on site
<i>Orcuttia californica</i>	California Orcutt grass	Endangered	Endangered	N - No vernal pool habitat on site

Source: Refer to **Appendix IV.C.2: Biological Resources Technical Report**.

Presence on site:

N – No occurrence on site

T – Indicates species are transient

Although the golden eagle is no longer listed as an endangered species, it is still protected by multiple federal laws such as the Eagle Act,<sup>11</sup> the Migratory Bird Treaty Act,<sup>12</sup> and the Lacey Act.<sup>13</sup> The peregrine falcon was listed as endangered in 1971 then federally delisted in 1999 but remains a fully protected species under the California Fish and Game Code Section 3511.<sup>14</sup> Similarly, the California brown pelican is a fully protected species under the California Fish and Game Code Section 3511.<sup>15</sup> Additionally, the Crotch bumblebee is a State Candidate for listing as Endangered.<sup>16</sup>

As shown in **Table IV.C-1** above, several protected bird species, such as golden and bald eagles, peregrine falcons, or bank swallows, may fly over the Project Site but would never reside there as the Project Site does not support their habitat. After these considerations, four species remain that may once have occupied the Project Site prior to development. These are the California gnatcatcher (bird), El Segundo and Palos Verdes Blue butterflies, and the Pacific Pocket Mouse. As shown in **Table IV.C-1**, each of these species has very specific habitat requirements and in the case of the butterflies, specific larval food plants. The California gnatcatcher requires coastal sage habitat, and the El Segundo and Palos Verdes butterflies require specific native foodplant varieties at their habitat that does not exist on the Project Site. Each of

11 16 U.S.C. Sections 668-668c

12 16 U.S.C Sections 703 et seq.; title 50 C.F.R. Part 10.

13 16 U.S.C. Sections 3371-3378

14 California Department of Fish and Wildlife, American Peregrine Falcons in California, <https://wildlife.ca.gov/Conservation/Birds/Peregrine-Falcon>. Accessed May 2021.

15 California Department of Fish and Wildlife, Fully Protected Animals, <https://wildlife.ca.gov/Conservation/Fully-Protected>. Accessed May 2021.

16 California Department of Fish and Wildlife, Threatened/Endangered Species And Special Plants & Animals List Updates, <https://wildlife.ca.gov/Data/CNDDDB/News/threatenedendangered-species-and-special-plants-animals-list-updates3>. Accessed May 2021.

the habitat requirements for these species are dependent on expansive areas of native habitat including soil profiles and plant cover. Because there are few native plants on the Project Site, and because there is no portion of the Project Site that is undisturbed, the potential for the Project Site to support any of the protected species found on the region is non-existent.

None of the species observed on site are considered particularly sensitive and none are specifically protected by State or federal law.

However, all bird species that occur on the Project Site are protected from nest disturbance by the federal MBTA and the California Fish and Game Code. These regulations prohibit the disturbance of nesting birds in any manner that may cause reproductive failure. In general, this means that land clearing must be accomplished during winter months while the birds are not nesting. As such, the removal of potential nesting sites during construction could occur. Therefore, the impact is classified as potentially significant, and mitigation is identified below.

**Threshold 4.BIO-2: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

The areas around the Project Site have all been previously disturbed and are vegetated with landscaping typical of residential development. As described in **Section III: Environmental Setting** of this Draft EIR, the Project Site is surrounded by urban development and has no natural connections to any large areas of natural habitat in the region. Additionally, the Project Site is not located within or adjacent to a Significant Ecological Area defined by the Los Angeles County Significant Ecological Areas Program.<sup>17</sup> As such, the Project Site does not currently function as a wildlife migration corridor. As shown in **Table IV.C-1** above, the Project Site does not contain any native wildlife nursery sites of note that would be impacted by the proposed Project. The proposed Project would be required to comply with the federal MBTA and the California Fish and Game Code. These regulations prohibit the disturbance of nesting birds in any manner that may cause reproductive failure. As previously discussed, potential to disturb nesting sites during construction represents a potentially significant impact and mitigation is identified below.

## 7. CUMULATIVE IMPACTS

A cumulative analysis for biological resources evaluates whether impacts of the proposed Project and related projects, when taken as a whole, would have a significant environmental impact on biological resources. The City resides in an urban setting which is mostly developed with new development primarily consisting of in-fill development. The Project Site is surrounded by existing urban development and is not

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<sup>17</sup> Los Angeles County. *Significant Ecological Areas Program*. <https://planning.lacounty.gov/site/sea/maps/>. Accessed May 2021.

located near any sites containing sensitive biological resources or serves as significant biological habitat that would be impacted by the development of related projects. The proposed Project would not contribute to cumulative impacts to biological resources locally.

## 8. MITIGATION MEASURES

### MM-Bio-1: Migratory Birds

To avoid impacts to birds nesting onsite, the following mitigation shall be implemented:

- Proposed ground clearing activities within 300 feet of potential nesting sites should take place outside of the breeding bird season which generally runs from February 1–August 31.
- If project activities cannot feasibly avoid the breeding bird season, beginning thirty days prior to the disturbance of suitable nesting habitat, the applicant shall arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within properties adjacent to the project site, as access to adjacent areas allows. The surveys shall be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work. If a protected native bird is found, the applicant shall delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat for the observed protected bird species until August 31. Alternatively, the Qualified Biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest or as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. The buffer zone from the nest shall be established in the field with flagging and stakes. Construction personnel shall be instructed on the sensitivity of the area. The applicant shall record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds. Such record shall be submitted and received into the case file for the associated discretionary action permitting the project.

## 9. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of MM-BIO-1, the proposed Project would have a less than significant impact on biological resources.

## IV.D CULTURAL RESOURCES

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### 1. INTRODUCTION

This section of the Draft EIR provides a discussion of existing cultural resources and applicable cultural resource laws and regulations, as well as an analysis of the potential effects from implementation of the proposed Project. This section incorporates information from the Cultural Resources Inventory Search prepared by PaleoWest dated February 5, 2020 (**Appendix IV.D.1: Cultural Resources Inventory Search**), and the Cultural Resource Inventory and Resource Documentation Technical Report dated April 16, 2021 (**Appendix IV.D.2: Cultural Resources Technical Report**).

### 2. ENVIRONMENTAL SETTING

#### Cultural Setting

##### *Prehistoric Setting*

The Gabrielino tribe were some of the earliest people to assume territory in what is now known as the City of Long Beach. This tribe had occupied almost the entire Los Angeles basin including the mountainous areas and the coast between Los Angeles and Orange counties.<sup>1</sup> Early Spanish settlers in the area had recorded populations of 50-200 Gabrielino people living in permanent villages, and by 1770, the total population in the Los Angeles basin was over 5,000. The Gabrielino tribe had developed multiple types of structures within their villages consisting of domed, circular structures covered in tule, fern, or Carrizo used for family and communal housing as well as sweathouses, menstrual huts, and ceremonial enclosures.

The Puvungna-Gabrielino community was among the most researched and consisted of a large settlement and important ceremonial site most likely located in the area occupied by Rancho Los Alamitos and currently occupied by California State University, Long Beach.<sup>2</sup> It is assumed to have served as a ritual center for the surrounding Gabrielino communities in the region. Sites associated with Puvungna were added to the National Register of Historic Places in 1974 and 1982.

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1 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

2 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

Santa Catalina island, which the Gabrielino people took as their territory, received Spanish contact in 1542 when Jaun Rodriguez Cabrillo arrived on the island.<sup>3</sup> Gaspar de Portola tried to colonize this Gabrielino territory and it is said that he made contact with the chief Hahamovic in the *Hahamog-na* village and in 1771, the Spanish established the Mission San Gabriel Archangel.

### **Historic Setting**

The Spanish had visited what is now the City of Long Beach beginning in the late 18<sup>th</sup> century and during the Spanish and Mexican reign over Alta California, ownership of southern Los Angeles was given primarily to prior government workers through land grants.<sup>4</sup> A man named Manuel Nieto, a Spanish soldier, was given around 300,000 acres of land by the governor of California in 1784 and following his death, the property was passed down to his heirs and eventually was divided into Rancho Los Alamitos and Rancho Los Cerritos. These two properties encompass what is now mainly the City of Long Beach as well as Rancho Los Alamitos to the east and Rancho Los Cerritos to the west.

During the California Gold Rush in the late 1800's, people migrated into California at exponential rates, increasing the need for a cattle industry in both the north and south. The brothers Thomas and Benjamin Flint as well as their cousins Lewellyn and Jotham Bixby, invested in this growing market and purchased Rancho Los Cerritos.<sup>5</sup> Then in 1878, John Bixby leased Rancho Los Alamitos, which he eventually purchased from the owner and the property became known as Bixby Ranch. Over the years, the Bixby family rehabilitated the old ranch and both Rancho Los Cerritos and Rancho Alamitos properties operated as ranches into the early decades of the 20<sup>th</sup> century.

The second settlement in the City of Long Beach was created during 1810 when William Erwin Willmore proposed development of a 4,000 acre site in Rancho Los Cerritos named Willmore City.<sup>6</sup> The development was to have a major street (now Long Beach Boulevard) which would connect the town to Los Angeles, and include waterfront resorts, a downtown business district, and 40-acre lots to be sold as family farm plots. After fruitless attempts to advertise the colony as the all-around perfect location for incoming residents, Willmore abandoned the development and the "American Colony" was purchased by the San

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3 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

4 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

5 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

6 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

Francisco real estate firm Pomeroy and Mills. The town was renamed Long Beach after the area's beaches and began to grow with the addition of a general store, hotel, a church, local newspaper (Long Beach Journal), as well as growing residences and businesses by 1885.

Alamitos Beach, Carroll Park, and Belmont Heights were annexed into Long Beach in the early 1900's and the population tripled as well as the acreage of the City.<sup>7</sup> Transportation throughout the City was improved with the addition of the Pacific Electric Streetcar Company and the Southern Pacific line and the San Pedro, Los Angeles, and Salt Lake Railroad (SPLA&SL) line expanded growth throughout the City. Tourism was the City's main attraction, including the Municipal Pier, Virginia Hotel, Majestic Dance Hall, and the Walk of a Thousand Lights.

The Port of Long Beach opened in June of 1911 and in 1918 after major floods and the collapse of the Los Angeles Dock and Terminal Company, Long Beach and the U.S. Army Corps of Engineers permanently established regular navigation between Los Angeles and Long Beach.<sup>8</sup> This became a huge economic factor for the City and trade flourished. In 1921, oil was discovered by Shell Oil Company in Signal Hill, which was an unincorporated area at the time, but the sale of oil quickly became the City's primary industry. The financial gain from the oil boom more than doubled the City's population and the effects of the wealth led to a boost in skyscrapers in the downtown, creating a more sophisticated looking commercial and civic area in the City.

### ***Present Setting***

The Project Site, owned by Oil Operators Inc., previously contained facilities used to treat production water from oil wells located throughout Long Beach and Signal Hill. Beginning in the mid-1920s, water treatment facilities were operated on the Site to treat water and other fluids recovered during oil production. The wastewater collection facility treated produced water (oil field brines) recovered during oil production. The water treatment, primarily oil separation, took place in a series of on-site settling basins. The basins were designed to remove oil and sediment from the produced water and then discharge the treated water to the Los Angeles County Sanitation District sewer system. In 1959, a wastewater treatment plant was constructed at the facility. The treatment plant consisted of five circular concrete-walled skimming basins and associated pumps, aboveground storage tanks, pipelines and related small buildings and facilities. Treatment operations ended in 1998 and the facilities were removed in 2001.

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7 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

8 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

Remediation of the residual oil in the settling basins has been ongoing since 2001 under the oversight of the City of Long Beach Environmental Health Department and the Los Angeles Regional Water Quality Control Board (RWQCB). All required remediation would be completed in accordance with a Remediation Action Plan approved by the RWQCB. The Site is currently vacant, studded with mostly non-native plants and is surrounded by temporary fencing.

## Cultural Resources

A cultural resources record search was conducted on February 25<sup>th</sup>, 2020 to determine whether any archaeological resources are present within the immediate vicinity of the Project Site (**Appendix IV.D.1**).<sup>9</sup> The cultural resources inventory included a literature review by South Central Coastal Information Center (SCCIC) at California State University, Fullerton, a search of the California Historic Resource Information System (CHRIS), and a review of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC). A review of the Office of Historic Preservation Archaeological Determination of Eligibility and the Office of Historic Preservation Directory of Historic Properties Data File is also included.

The records search included the Project area as well as a quarter-mile (0.25 mile) radius. The results indicated that “three previous studies have been conducted: the first study (LA-03102) was completed in 1994 that encompassed the entire Project area, as second study (LA-11993) was conducted in 2012 and included the northern portion of the project area, and a third study (LA-00358) which was conducted in 1976.” The results concluded that no historic or prehistorical archaeological resources were identified within the recorded search area.

The search also included analyzing historical topographic maps and aerial photos of the Project Site, which found that West Baker Street had been constructed by 1930 including an oil field in the southern portion added on in the 1950’s to early 1960’s. The oil facility had been demolished within the last 10 years, but the portion of Baker Street west of Golden Avenue is still present. After reviewing historic maps and aerial photographs, documentation and/or evaluation of West Baker Street roadway and the historic remnants of the oil facility were recommended.

An on-site cultural resources field survey was conducted on March 25, 2021 to assess landforms within the Project Site which would likely contain or exhibit archaeological or historical remains.<sup>10</sup> Cultural resources identified during the survey were recorded on appropriate California Department of Parks and Recreation (DPR) Series 523 forms. For the purposes of the study, a cultural resource was defined as any archaeological remains or standing building or structure greater than 45 years of age (**Appendix IV.D.2**).

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9 PaleoWest, Cultural Resource Inventory for the Long Beach River Park, March 11, 2020, Appendix 4.D.1.

10 PaleoWest, Cultural Resource Inventory and Resource Documentation for the Long Beach River Park, April 16, 2021, Appendix 4.D.2.

Two historic-era remnants of the oil wastewater treatment facility were identified (20-124-01H) and the portion of the right-of-way for Baker Street located on the Site were documented and evaluated for listing on the California Register Historical Resources (CRHR). Descriptions and evaluations of these two resources are provided below. Details regarding the tribal consultation process please refer to **Section IV.N: Tribal Cultural Resources**.

### 3. REGULATORY SETTING

Historic resources fall within the jurisdiction of several levels of government. Federal laws provide the framework for the identification and, in certain instances, protection of historic resources. Additionally, states and local jurisdictions play active roles in the identification, documentation, and protection of such resources within their communities. The primary federal and State laws governing and affecting preservation of historic resources of national, State, regional, and local significance are the National Historic Preservation Act (NHPA) of 1966, as amended; the California Environmental Quality Act (CEQA); and the California Register of Historical Resources (California Register), Public Resources Code (PRC) 5024. As archaeological resources are also considered historic, regulations applicable to historic resources are also applicable to archaeological resources and are discussed and analyzed in this section. Descriptions of these relevant laws and regulations are presented below.

#### Federal

##### ***Archaeological Resources Protection Act***

The intent of the Archaeological Resources Protection Act of 1979 (ARPA) is to ensure preservation and protection of archaeological resources on public and Native American lands.<sup>11</sup> ARPA places primary emphasis upon a Federal permitting process in order to control the disturbance and investigation of archaeological sites on these lands. In addition, ARPA's protective provisions are enforced by civil penalties for violation of the Act. Under this regulation, the term “archaeological resources” includes but is not limited to:

*Pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items. Nonfossilized and fossilized paleontological specimens, or any portion or piece thereof, shall not be considered archaeological resources, under the regulations under this paragraph, unless found in an archaeological context. No item shall be treated as an archaeological resource under regulations under this paragraph unless such item is at least 100 years of age.*<sup>12</sup>

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11 United States Code (USC). sec. 470aa–470mm, Archaeological Resources Protection Act of 1979, Public Law (PL) 96-95, as amended.

12 USC sec. 470aa–470mm, Archaeological Resources Protection Act of 1979, Public Law 96-95, as amended, sec. 3, accessed July 2018, available at [https://www.nps.gov/subjects/historicpreservation/upload/NPS\\_FHPL\\_book\\_online.pdf](https://www.nps.gov/subjects/historicpreservation/upload/NPS_FHPL_book_online.pdf).

ARPA mandates consultation procedures before initiation of archaeological research on Native American lands or involving Native American archaeological resources. Section 4(c) requires Native American tribes be notified of possible harm to, or destruction of, sites having religious or cultural significance to that group. The Federal land manager must notify affected tribes before issuing the permit for archaeological work. Section (g)(2) specifies that permits to excavate or remove archaeological resources from Indian lands require consent of the Native American or Native American tribe owning or having jurisdiction over such lands. The permit, it is also stipulated, must include such terms and conditions as may be requested by the affected Native Americans.

Concerning the custody of archaeological resources, ARPA stipulates that any exchange or ultimate disposition of archaeological resources excavated or removed from Native American lands must be subject to the consent of the Native American or Native American tribe that owns or has jurisdiction over such lands.

### ***National Historic Preservation Act***

The 1966 NHPA authorized formation of the National Register of Historic Places (National Register) and coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources.<sup>13</sup> Buildings, districts, sites, and structures may be eligible for listing in the National Register if they possess significance at the national, State, or local level in American history, culture, architecture, or archaeology and, in general, are more than 50 years old.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. A Section 106 Review refers to the federal review process designed to ensure that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation (ACHP), an independent federal agency, administers the review process, with assistance from the State Historic Preservation Offices (SHPOs). If any impacts are identified, the agency undergoing the project must identify the appropriate SHPO to consult with during the process.

### ***National Register of Historic Places***

The National Register was established by the NHPA, as “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

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13 National Historic Preservation Act of 1966 amend thru 1992, Public Law. Approved October 15, 1966 (Public Law 89-665; 80 STAT.915; 16 U.S.C. 470) as amended by Public Law 91-243, Public Law 93-54, Public Law 94-422, Public Law 94-458, Public Law 96-199, Public Law 96-244, Public Law 96-515, Public Law 98-483, Public Law 99-514, Public Law 100-127, and Public Law 102-575)

indicate what properties should be considered for protection from destruction or impairment.”<sup>14</sup> The National Register recognizes properties that are significant at the national, State, and/or local levels.

### ***Paleontological Resources Preservation Act***

In 2009, the Paleontological Resources Preservation Act (PRPA) became law when President Barack Obama signed the Omnibus Public Land Management Act of 2009, Public Law 111-011.<sup>15</sup> The PRPA requires the secretaries of the interior and agriculture to manage and protect paleontological resources on federal land using scientific principles and expertise. The PRPA includes specific provisions addressing management of these resources by federal agencies. It provides authority for the protection of paleontological resources on federal lands, including criminal and civil penalties for fossil theft and vandalism. The PRPA only applies to federal lands and does not affect private lands.

## **State**

### ***California Public Resources Code***

Archaeological, paleontological, and historical sites are protected pursuant to a wide variety of State policies and regulations enumerated under the PRC. In addition, cultural and paleontological resources are recognized as a nonrenewable resource and, therefore, receive protection under the PRC and CEQA.

As part of the determination made pursuant to PRC Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources (PRC Section 21083.2). PRC Section 21083.2(b) provides the following guidance on how to mitigate or avoid the significant effects that a project may have on unique archeological resources, stating:

*If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:*

1. *Planning construction to avoid archaeological sites.*
2. *Deeding archaeological sites into permanent conservation easements.*
3. *Capping or covering archaeological sites with a layer of soil before building on the Sites.*
4. *Planning parks, greenspace, or other open space to incorporate archaeological sites.*

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<sup>14</sup> Code of Federal Regulations (CFR), pt. 60.2.

<sup>15</sup> PL 111-011, tit. VI, subtit. D on Paleontological Resources Preservation (known by its popular name, the Paleontological Resources Preservation Act) (123 Stat. 1172; 16 USC 470aaa).

As defined within PRC Section 21083.2(g), “unique archaeological resource” means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. *Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
2. *Has a special and particular quality such as being the oldest of its type or the best available example of its type.*
3. *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

As defined in PRC Section 21083.2(h), “nonunique archaeological resource” means an archaeological artifact, object, or site that does not meet the criteria in subdivision (g). A nonunique archaeological resource need be given no further consideration other than the simple recording of its existence by the lead agency if it so elects. Pursuant to PRC Section 21083.2(i), as part of conditions imposed for mitigation, a lead agency may make provisions for archaeological sites accidentally discovered during construction. These provisions may include an immediate evaluation of the find. If the find is determined to be a unique archaeological resource, contingency funding, and a time allotment sufficient to allow recovering an archaeological sample or to employ one of the avoidance measures may be required under the provisions set forth in this section. Construction work may continue on other parts of the building site while archaeological mitigation takes place.

If additional archaeological resources are discovered during excavation, grading, or construction activities, work shall cease in the area of the find until a qualified archaeologist has evaluated the find in accordance with federal, State, and local guidelines, including those set forth in PRC Section 21083.2.

Personnel of the proposed Project shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the Project Site. The found deposits would be treated in accordance with federal, State, and local guidelines, including those set forth in PRC Section 21083.2:

- Distinctive features, finishes, and construction techniques or examples of skilled craftsmanship which characterize an historic property shall be preserved.
- Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive historic feature, the new feature shall match the old in design, color, texture, and other visual qualities, and where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

- Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
- Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
- New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
- New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

State regulations mandate protection of paleontological resources on public lands, and CEQA requires evaluation of impacts to paleontological sites. Paleontological resources are also subject to certain State regulations for historical resources. Appendix G of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, indicating that a project would have a significant impact on paleontological resources if it were to disturb or destroy a unique paleontological resource or site or unique geologic feature. Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, California Penal Code Section 622.5 sets the penalties for the unlawful damage or removal of paleontological resources.

### ***California Register Historical Resources***

The California Register is the authoritative guide to the State's significant archaeological and historical resources.<sup>16</sup> It closely follows the eligibility criteria of the National Register but deals with State- and local-level resources. The California Register serves to identify, evaluate, register, and protect California's historical resources. For purposes of CEQA, a historical resource is any building, site, structure, object, or historic district listed in or eligible for listing in the California Register (PRC, Section 21084.1). As stated in the PRC, a resource is considered eligible for listing in the California Register if it meets any of the following criteria:

- a. *Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*

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16 State of California, Office of Historic Preservation, California Historical Resources, <https://ohp.parks.ca.gov/listedresources>.

- b. *Is associated with the lives of persons important in our past.*
- c. *Embodies the distinctive characteristics of type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*
- d. *Has yielded, or may be likely to yield, information important in prehistory or history [Public Resources Code Section 5024.1(c)].*<sup>17</sup>

Historical resources meeting one or more of the criteria listed above are eligible for listing in the California Register. In addition to significance, resources must have integrity for a period of significance—the date or span of time within which significant events transpired or significant individuals made important contributions. Important archaeological resources are required to be at least 50 years old to be considered. “Integrity is the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” Simply put, resources must “retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.”<sup>18</sup>

CEQA also requires the lead agency to consider whether there is a significant effect on unique archaeological resources that are not eligible for listing in the California Register. As defined in CEQA, a unique archaeological resource is:

*An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*

1. *Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
2. *Has a special and particular quality such as being the oldest of its type or the best available example of its type.*
3. *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

If an archaeological resource is found eligible for listing in the California Register, then it is considered under CEQA to be a historic resource that needs to be protected. This may also apply to unique archaeological resources. If a historic resource may be impacted by activity, under CEQA, avoidance and preservation in place is the preferred alternative. If that is not possible, then a data recovery plan will need to be created and enacted to lessen impacts to the environment to a less than significant level. If the

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17 Public Resources Code (PRC), Division 5. Parks and Monuments[5001 - 5873], “CHAPTER 1. State Parks and Monuments,” Article 2. Historical Resources (5024.1).

18 Secretary of the Interior’s Standards and Guidelines, Archeology and Historic preservation. 1983.

archaeological resource is not eligible for listing in the California Register, and it is not a unique archaeological resource, then no further action is required to protect or mitigate possible impacts to it.

### **California Environmental Quality Act**

CEQA and the CEQA Guidelines have specific provisions relating to the evaluation of a project's impact on historical and unique archaeological resources. PRC Section 21084.1 and Section 15064.5 of the CEQA Guidelines together establish the prevailing test for determining whether a resource can or must be considered a historical resource under CEQA.

First, a resource is considered a historical resource for purposes of CEQA if it is listed or "deemed eligible for listing" in the California Register by the State Historical Resources Commission (SHRC).<sup>19</sup> Second, it will be considered a historical resource, based on a presumption of significance, if it is either (1) listed in a local register of historic resources as defined in PRC Section 5010.1.4, or (2) identified in a local survey of historic resources meeting the criteria set forth in PRC Section 5024.1.5. If a resource meets either of these criteria, the lead agency must treat the resource as historically significant unless the "preponderance of the evidence" indicates that the resource is not historically significant. Third, a lead agency may find a resource to be a historical resource even though it is not formally listed in the California Register, listed in a local register, or identified in a local survey.<sup>20</sup> Any such determination must be based on substantial evidence in light of the whole record.

CEQA also provides further guidance with respect to historical resources of an archeological nature and unique archaeological resources. A unique archeological resource is defined in PRC Section 21083.2(g) as:

*[A]n archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information, (2) has a special and particular quality such as being the oldest of its type or best available example of its type, and (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.*

According to the CEQA Guidelines Section 15064.5(b): "A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have

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19 PRC sec. 21084.1 and 15064.5

20 PRC sec. 21084.1; sec. 15064.5(a)(3)(4)

a significant effect on the environment.” This section of the guidelines defines historical resources as including both the built environment and archaeological resources.

A substantial adverse change is defined in the CEQA Guidelines Section 15064.5(4)(b)(1), as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.” The significance of an historical resource is materially impaired, according to the CEQA Guidelines Section 15064.5(4)(b)(2), when a project:

- a. *Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or*
- b. *Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of the evidence that the resource is not historically or culturally significant; or*
- c. *Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.*

The CEQA Guidelines provide that “generally,” a project that follows the Secretary’s Standards “shall be considered as mitigated to a level of less than a significant impact on the historical resource.”

At the same time, however, a failure to precisely conform to the Secretary’s Standards in all respects does not necessarily mean that a project necessarily has a significant adverse impact on historical resources. There are circumstances where a project impacting historical resources may fail to conform to the Secretary’s Standards, and yet the lead agency can conclude based on substantial evidence that the overall impact is insignificant because the project does not “materially impair” the historical resource within the meaning of Section 15064.5(b).

CEQA Guidelines Section 15064.5 subsection (c) addresses impacts on archaeological sites. That section provides as follows:

1. *When a project will impact an archaeological site, a lead agency shall first determine whether the Site is an historical resource, as defined in subsection (a).*
2. *If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.*
3. *If an archaeological site does not meet the criteria defined in subsection (a) but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the Site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.*

For historical resources of an archaeological nature,

*Preservation in place is the preferred manner of mitigating impacts to archaeological sites... When recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken.<sup>21</sup>*

In practice, the California Office of Historic Preservation (OHP) has consistently determined that excavation, coupled with implementation of a data recovery plan, does not result in a significant environmental impact on a historical resource of an archaeological nature.

If a project would cause “damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state...To the extent that unique archaeological resources are not left in an undisturbed state, mitigation measures shall be required as provided in this subdivision.”<sup>22</sup> CEQA Guidelines Section 15064.5(f) provides that “a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction.”

CEQA Guidelines Section 15064.5(d) specifies a process for evaluating human remains, and this issue is identified on the CEQA Checklist as an issue for evaluation in environmental documents. In addition,

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<sup>21</sup> CEQA Guidelines sec. 15126.4(b)(3)(A).

<sup>22</sup> PRC sec. 21083.2(b) and (c)

the CEQA Checklist identifies the presence of paleontological resources as an environmental concern that needs to be considered.

### ***State Health and Safety Codes***

If human remains are encountered unexpectedly during implementation of a project, State Health and Safety Code Section 7050.5 requires 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.<sup>23</sup>

If the remains are determined to be of Native American descent, the following procedure must be observed:

- a. *The immediate vicinity must be secured according to generally accepted cultural or archaeological standards or practices.*
- b. *The coroner has 24 hours to notify the NAHC.*
- c. *The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the Project Applicant, inspect the Site of the discovery of the Native American remains and may recommend means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods.*
- d. *The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the Project Applicant to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The area must not be damaged or disturbed by further development activity until the Applicant has discussed and conferred with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.*
- e. *If the Project Applicant or his or her authorized representative rejects the recommendation of the MLD, the Project Applicant of MLD may request mediation per Subdivision (k) of PRC Section 5097.94.*
- f. *If the NAHC is unable to identify an MLD, or the MLD identified fails to make a recommendation, or the mediation provided for in Subdivision (k) of PRC Section 5097.94, if invoked, fails to provide reasonable treatment, then the human remains and items associated with Native American human remains must be interred with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.*

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23 California Health and Safety Code, sec. 7050.5 and 5097.98

**Local**

**City of Long Beach General Plan**

The following Elements, and the relevant goals and policies applies to cultural resources within the City.

**Historic Preservation Element**

**Goal 1 :** Maintain and support a comprehensive, citywide historic preservation program to identify and protect Long Beach’s historic cultural, and archaeological resources.

**Policy 1.1:** The City shall comply with City, State, and Federal historic preservation regulations to ensure adequate protection of the City’s cultural, historic, and archaeological resources

**Policy 1.2:** The City shall maintain its status as a Certified Local Government (CLG) and ensure that CLG requirements are implemented as the key components of the City’s historic preservation program.

**Policy 1.4:** The City shall use public input to help shape the historic preservation program.

**Goal 2:** Protect historic resources from demolition and inappropriate alterations through the use of the City’s regulatory framework, technical assistance, and incentives.

**Policy 2.4:** The City shall ensure compliance of all historic preservation, redevelopment, and new construction projects with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act.

**Policy 2.5:** The City shall enforce historic preservation codes and regulations.

**Policy 2.6:** The City shall implement and promote incentives for historic preservation.

**Policy 2.7:** The City shall encourage and support public, quasi-public, and private entities in local preservation efforts, including the designation of historic resources and the preservation of designated resources.

**Goal 5:** Integrate historic preservation policies into City’s community development, economic development, and sustainable-city strategies.

- Policy 5.2:** The City shall consider historic preservation as a basis for neighborhood improvement and community development.
- Policy 5.3:** The City shall consider historic preservation goals and policies when making community and economic development decisions and determining sustainable-city strategies.
- Policy 5.7:** The City shall promote historic preservation as a sustainable land use practice.

### ***The Long Beach Municipal Code***

The Long Beach Municipal Code (LBMC) Chapter 2.63 Cultural Heritage Commission, includes provisions to ensure the recognition, preservation, protection, and use of cultural resources are necessary to the health, property, social and cultural enrichment, and general welfare of the people. The City’s Cultural Heritage Ordinance is designed to protect districts, buildings, structures, natural features, works of art, signs and other objects that are reminders of the past. The ordinance is structured to address the particular needs and resources within a community. It also establishes procedures for the designation of landmarks:

- A. It is associated with events that have made a significant contribution to the broad patterns of the City’s history; or
- B. It is associated with the lives of person significant in the City’s past; or
- C. It embodies the distinctive characteristics of a type, period, or method of construction, or it represents the work of a master or it possesses high artistic value; or
- D. It has yielded, or may likely to yield, information important in prehistory or history.

## **4. ENVIRONMENTAL IMPACTS**

### ***Thresholds of Significance***

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to cultural resources if it would:

- Threshold CUL-1:** Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?
- Threshold CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

## 5. METHODOLOGY

The analysis in this section addresses potential project impacts relating to cultural resources may be affected by the proposed project. Impacts to cultural resources would be determined by available information through record searches and through on-site field surveys conducted by qualified archeologists and historians. Data and information collected through record searches and field surveys would be analyzed to identify culturally significant resources. Effects of the proposed Project would then be applied to significant cultural resources, if any, to determine the proposed Project impacts on any culturally significant resources.

### Cultural Resources Inventory

CEQA Guidelines Section 15064.5 defines a historic resource as one that is: (1) listed in, or determined to be eligible for listing in the California Register of Historical Resources; (2) included in a local register of historical resources (pursuant to PRC Section 5020.1(k)); or (3) identified as significant in an historical resources survey (meeting the criteria in PRC Section 5024.1(g)). Additionally, any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered "historically significant" by the lead agency if the resource meets the criteria for listing on the California Register of Historical Resources.

As previously mentioned, a cultural resource record search was conducted on February 25<sup>th</sup>, 2020 to determine whether any cultural resources are present within immediate vicinity of the Project Site (**Appendix IV.D.1**). The cultural resources inventory included a literature review by SCCIC at California State University, Fullerton, a search of the California Historic Resource Information System (CHRIS), and a review of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC). It also included a review of the Office of Historic Preservation Archaeological Determination of Eligibility and the Office of Historic Preservation Directory of Historic Properties Data File.

An on-site field survey was conducted on March 25, 2021, to assess landforms within the Project Site which would likely contain or exhibit archaeological or historical remains.<sup>24</sup> Cultural resources identified during the survey were recorded on appropriate California Department of Parks and Recreation (DPR)

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24 PaleoWest, Cultural Resource Inventory and Resource Documentation for the Long Beach River Park, April 16, 2021, Appendix 4.D.2.

Series 523 forms. For the purposes of this study, a cultural resource is defined as any archaeological remains or standing building or structure that is greater than 45 years of age (**Appendix IV.D.2**).

Details regarding the tribal consultation process please refer to **Section IV.M: Tribal Cultural Resources**. Paleontological resources are discussed in **Section IV.F: Geology and Soils**.

## 6. PROJECT IMPACTS

**Threshold IV.CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?**

The Project Site is not identified by the City of Long Beach General Plan Historic Preservation Element as a historical resource and is not in a historic district.<sup>25</sup> Based on a records search conducted by the SCCIC at California State University, Fullerton, included as part of the Cultural Resources Inventory Records Search, no historical or prehistoric resources were identified on or near the Project Site.<sup>26</sup>

The Project Site consists of disturbed vacant land previously used to treat water from oil production in the area and does not contain any existing buildings or structures. Remnants of the water treatment facility previously located on the Project Site and demolished within the last 10 years, remain on the Site.

The Cultural Resources Technical Report and field survey evaluated the historic-era remnants of the oil wastewater treatment facility (20-124-01H) and portion of the right-of-way for Baker Street on the Site which consists of the entire Project Site, for eligibility for listing on the California Register Historical Resources (CRHR). The Project Site consists of the remnants of the wastewater treatment facility that operated on the Project property between 1926 and 1998. The Project Site measures approximately 2,000 by 540 feet and is composed of 12 features that include a platform, cinder block wall, a concrete pump house or valve box, concrete drain and catchment basin, structural foundation, two large basins, two wooden boxes with steel guardrails, a steel guardrail boundary, concrete retaining wall, and a graded pad. No artifacts or other cultural remains of historic age were identified within the Project Site; however, a few pieces of steel pipe were observed. The facility was removed, and bioremediation was initiated on the property in 2004. In 2011, two large concrete-walled skimming basins were removed with those areas subsequently used for the placement of the bioremediation soil. The Project Site has been highly and frequently disturbed by historic and modern urban encroachment, utilities, homeless encampments, and the demolition of the wastewater treatment facility. Portions of the Project Site have also been regularly

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25 City of Long Beach General Plan, Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010), accessed May 2020.

26 PaleoWest, Cultural Resource Inventory for the Long Beach River Park, March 11, 2020, Appendix 4.D.1.

tilled in accordance with bioremediation efforts to treat soil contamination. In addition, modern infrastructure was found throughout the Project Site including water and sewer lines and utility poles.

Site 20-124-01H does not meet any criterion for listing in the CRHR. As previously stated, the wastewater collection/treatment facility was in use between 1926 and 1998. While the Project Site is generally associated with the oil exploration and extraction industry in the Long Beach/Signal Hill area, historical research found no evidence to suggest the facility is associated with important events related to the development or operation of the oil industry in the area. Moreover, the Site cannot be linked with any significant persons in history. Thus, it does not appear eligible for listing on the CRHR under Criteria 1 and 2. Much of the facility has been demolished and subject to bioremediation. As a result of these activities, only remnants of the facility are extant on the Project Site. The features that comprise Site 20-124-01H are common to wastewater treatment facilities throughout the Long Beach/Signal Hill area and are of standard design and construction. As such, the Project Site does not exhibit any architectural or engineering merits that would qualify it as significant under Criterion 3. Finally, it was concluded that additional study of these remains would be unlikely to yield significant information on the oil industry in the region. As a result, Site 20-124-01H is recommended not eligible for listing in the CRHR under Criterion 4.

The segment of Baker Street that intersects the current Project area is an asphalt-paved road that is approximately 470 feet long and 19 feet wide. The eastern portion of this segment is paved, while the western half is coarse road base and gravel. The pavement is uneven and contains cracks and ruts. This segment of the street is flanked by vacant lots on the north and south and is restricted with the use of a gate on the eastern edge of the recorded segment. This segment of Baker Street appears to have been in use as early as 1924 and connected to a footbridge that crossed the Los Angeles River to the west. The road appears to have been paved between 1930 and 1949. Currently, the street is in drivable condition though it does not appear to be frequently maintained.

This segment of Baker Street does not appear to meet any criterion for listing in the CRHR. As previously stated, the street was in use as early as 1924 and appears to have provided access to a footbridge over the Los Angeles River; however, there is no apparent association with any significant event in the history of the City of Long Beach or the Los Angeles River. Moreover, the street cannot be linked to any significant persons in history. Thus, it does not appear eligible for listing on the CRHR under Criteria 1 and 2. This segment of the street does not appear to be a major departure from road construction or an impressive or unique feat of engineering. Therefore, the recorded segment of Baker Street does not appear eligible for the CRHR under Criterion 3. Finally, it does not have the potential to yield any information important to the study of our local, State, or national history and is therefore not eligible under Criterion 4.

Based on the cultural resources inventory search, the cultural resources technical report, and the field survey findings, the remnants of the oil wastewater treatment facility (20-124-01H) and the in-use historical Baker Street roadway were not recommended eligible for listing on the CRHR. As such there are no identified culturally significant resources on or in the vicinity of the Project Site. In addition, the Project Site has been highly and frequently disturbed by the construction, removal, and bioremediation of the wastewater treatment facility. As such, it is unlikely that any intact buried archaeological remains are present within the Project Site. Project Impacts would be less than significant.

**Threshold IV.CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**

CEQA Guidelines Section 15064.5(a)(3)(D) defines archaeological resources as any resource that “has yielded, or may be likely to yield, information important to prehistory or history.” Archaeological resources are features, such as tools, utensils, carvings, fabric, building foundations, etc., that document evidence of past human endeavors and that may be historically or culturally important to a significant earlier community.

The Project Site is not identified by the City of Long Beach General Plan Historic Preservation Element as containing any archaeological resources.<sup>27</sup> As previously mentioned, the cultural resources records search included the area of a quarter-mile radius around the Project Site, for the purpose of identifying any known cultural resources within the vicinity of the Project Site.

The cultural resources inventory search indicated that the Project Site has been developed since the 1950s and no prehistoric or historical archaeological resources have been previously identified on the Site.<sup>28</sup> However, remnants of the water treatment facility previously located on the Site, and demolished within the last 10 years, remain on the Site. The remains of the water treatment facility were determined to not be eligible for listing in CRHR and not historically or archeologically significant. As identified in the cultural resources field survey,<sup>29</sup> no artifacts or other cultural remains of historic importance were identified on the Site. The Site was noted to be highly and frequently disturbed by historic and modern urban encroachment, utilities, homeless encampments, and the demolition of the wastewater treatment facility. Portions of the Site were also observed to have been regularly tilled in accordance with

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27 City of Long Beach General Plan, Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010), accessed March 2021.

28 City of Long Beach General Plan, Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010), accessed March 2021.

29 PaleoWest, Cultural Resource Inventory and Resource Documentation for the Long Beach River Park Development Project, April 16, 2021, Appendix 4.D.2.

bioremediation efforts to treat contaminated soil. In addition, grading of the Project Site is not expected to exceed 8-feet in depth which is likely within the depth of existing disturbance due to demolition and bioremediation activities. Because of the disturbances noted, it is highly unlikely that any intact buried archaeological remains would be present in the Project area. For these reasons, no impacts to archeological resources are anticipated. Impacts would be less than significant.

## **7. CUMULATIVE IMPACTS**

A cumulative analysis for cultural resources evaluates whether impacts of the proposed Project and related projects, when taken as a whole, would have a significant environmental impact on cultural resources. The geographic area for cumulative analysis of cultural resources is the City of Long Beach. The City resides in an urban setting which is mostly built out with new developments occurring primarily as in-fill development, such as the proposed Project. As previously stated, there were no historically or archeologically significant cultural resources identified within the proposed Project. For this reason, the Project would not contribute to any cumulative impacts to Cultural Resources. The proposed Project, combined with other reasonably probable future related developments would not result in a significant cumulative impact related to cultural resources.

Therefore, cumulative impacts during construction and operation would not be cumulatively considered significant.

## **8. MITIGATION MEASURES**

The Project 's impacts, cumulative impacts, and contribution to cumulative impacts would be less than significant. Therefore, no mitigation measures are required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed Project would have a less than significant impact on cultural resources. Therefore, no mitigation measures would be required.

### 1. INTRODUCTION

This section of the Draft EIR provides a discussion of energy resources and applicable laws and regulations associated with energy, as well as an analysis of the potential effects resulting from implementation of the proposed project. Calculation worksheets used in the analysis are contained in **Appendix IV.E.1: Energy Calculations** of this Draft EIR.

### 2. ENVIRONMENTAL SETTING

#### Existing Conditions

##### *Electricity*

Electricity is typically a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for use by customers. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

According to the California Energy Commission's (CEC), the State of California consumed 277,750 GWh of electricity in 2019, with electricity demand projected to rise to 317,217 GWh in 2030, the furthest year of currently available projections.<sup>1</sup>

The Project Site is within the Southern California Edison (SCE) service area. The SCE service area covers 50,000 square miles and includes 15 counties, which serve approximately 15 million people in central,

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1 California Energy Commission (CEC), Final 2020 Integrated Energy Policy Report Update Volume III California Energy Demand Forecast Update, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2020-integrated-energy-policy-report-update>. Accessed April 2021.

coastal, and Southern California.<sup>2</sup> The SCE planning area used approximately 105,162 GWh of electricity in 2019.<sup>3</sup> The SCE estimates that electricity consumption within its planning area will be approximately 125,000 GWh annually by 2027, when the proposed Project would be fully built out.<sup>4</sup>

Furthermore, SCE supplies power to homes and businesses via different plan options, including “Green Rates.”<sup>5</sup> The Green Rate gives consumers the opportunity to purchase renewable energy. By participating in the Green Rate, consumers support local solar power, reducing greenhouse gas (GHG) emissions associated with electricity. To support this effort, SCE purchases additional renewable energy to meet the needs of Green Rate participants from solar renewable developers within the SCE service territory. This is a voluntary program available to both residential and nonresidential energy users who receive power generation, metering, and related services from SCE. In 2017, SCE released *The Clean Power and Electrification Pathway* (Pathway) which presents SCE’s integrated blueprint to meet the State’s goal of 40 percent reduction in GHG emissions from 1990 levels by 2030.<sup>6</sup> Specifically, SCE’s Pathway calls for:

- An electric grid supplied by 80 percent carbon-free energy;
- More than 7 million electric vehicles on California roads; and
- Using electricity to power nearly one-third of space and water heaters, in increasingly energy-efficient buildings.

The nearest transmission lines to the Project Site include two north/south 220 kilovolt (kV) lines and one north/south 69 kV line approximately 0.33 miles to the west.<sup>7</sup> No electricity is currently used on the vacant Project Site.

## **Natural Gas**

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network and, therefore, resource availability is typically not an issue. Natural gas satisfies almost one-third of the State’s total energy requirements and is used in electricity

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2 Southern California Edison (SCE), Southern California Edison’s Service Area, <https://www.sce.com/about-us/who-we-are/leadership/our-service-territory>. Accessed April 2021.

3 CEC, California Energy Consumption Database, Electricity Consumption by Planning Area, <http://ecdms.energy.ca.gov/elecbyplan.aspx>. Accessed April 2021.

4 CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, <https://efiling.energy.ca.gov/getdocument.aspx?tn=223244>. Accessed April 2021.

5 SCE, Green Rates, <https://www.sce.com/residential/rates/standard-residential-rate-plan/green-rates>. Accessed April 2021.

6 SCE, The Clean Power and Electrification Pathway, <https://www.edison.com/home/our-perspective/clean-power-and-electrification-pathway.html>. Accessed April 2021.

7 California Energy Commission, Electric Infrastructure Map, <https://cecgis-caenergy.opendata.arcgis.com/app/ad8323410d9b47c1b1a9f751d62fe495>. Accessed April 2021.

generation, space heating, cooking, water heating, industrial processes, and as transportation fuel. Natural gas is primarily measured in terms of cubic feet (cf), as well as in terms of British thermal units (Btu) and Therms.<sup>8</sup>

According to the CEC's California Energy Consumption Database, the State of California consumed 13,158 million Therms of natural gas in 2019,<sup>9</sup> with demand projected to rise to 12,800 million Therms in 2030,<sup>10</sup> the furthest year of currently available projections.

Natural gas for the proposed Project area is provided by the City of Long Beach Energy Resources Department (LBER). LBER provides natural gas to approximately 500,000 residents and businesses in Long Beach and Signal Hill and delivers gas through more than 1,800 miles of pipelines.<sup>11</sup> Natural gas for LBER is purchased on the open competitive market. Based on the 2020 California Gas Report, LBER supplied approximately 26.3 millions of cubic feet (MMcf) of natural gas per day in 2020 and is expected to supply 26.3 MMcf of natural gas per day in 2027, when the proposed Project would be fully built out.<sup>12</sup> The Project Site is currently vacant and no natural gas is used.

### **Petroleum Based Fuel**

Crude oil is a mixture of hydrocarbons that exists as a liquid in underground geologic formations and remains a liquid when brought to the surface.<sup>13</sup> Petroleum products are produced from the processing of crude oil and other liquids and include transportation-related fuels such as gasoline and diesel. Petroleum is a worldwide commodity. According to the U.S. Energy Information Administration (EIA), California consumed approximately 681,272,000 barrels (28,613,424,000 gallons, or 42 gallons per barrel) in 2018, the most recent year of publicly available data.<sup>14</sup> The EIA forecasts a national oil supply of 19.9 million barrels per day (mb/d) in 2027, which is the opening year for the Project.<sup>15</sup> This equates to approximately 7,263 million barrels per year (mb/y) or 305,067 million gallons per year (mg/y).<sup>16</sup>

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8 One Therm is equivalent to 100,000 British thermal units (BTU) or 100 kBTU. A Therm is approximately the energy equivalent of burning 100 cubic feet (1 cf) of natural gas. The conversion of kBTU to cubic feet uses the factor of 1 cf to 1.037 kBTU.

9 CEC, California Energy Consumption Database, Gas Consumption by County, <https://ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed April 2021.

10 CEC, Final 2019 Integrated Energy Policy Report, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report>. Accessed April 2021.

11 City of Long Beach, Energy Resources, <http://www.longbeach.gov/energyresources/>. Accessed April 2021.

12 California Public Utilities Commission, 2020 California Gas Report, [https://www.socalgas.com/sites/default/files/2020-10/2020\\_California\\_Gas\\_Report\\_Joint\\_UTILITY\\_Biennial\\_Comprehensive\\_Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_UTILITY_Biennial_Comprehensive_Filing.pdf). Accessed April 2021.

13 U.S. Energy Information Administration (EIA), Frequently Asked Questions, <https://www.eia.gov/tools/faqs/faq.php?id=40&t=6>. Accessed April 2021.

14 U.S. EIA, Independent Statistics & Analysis, Table F16: Total Petroleum Consumption Estimates, 2018, [https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep\\_fuel/html/fuel\\_use\\_pa.html&sid=US](https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US). Accessed April 2021.

15 U.S. EIA, Annual Energy Outlook 2020, Table 11. Petroleum and Other Liquids Supply and Disposition, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=11-AEO2020&cases=ref2020&sourcekey=0>. Accessed April 2021.

16 One oil barrel is equivalent to 42 gallons.

Over the last several decades, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs emissions from the transportation sector, and reduce vehicle travel. Incentive programs, such as the CEC’s Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP), are helping the State to reduce its dependency on gasoline. The CEC predicts that the demand for gasoline will continue to decline over the upcoming years, and there will be an increase in the use of alternative fuels.<sup>17</sup>

### 3. REGULATORY SETTING

#### Federal Setting

##### ***Corporate Average Fuel Economy (CAFE) Standards***

Established by the U.S. Congress in 1975, the CAFE standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and the United States Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the “maximum feasible level” with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy. When these standards are raised, automakers respond by creating a more fuel-efficient fleet. In 2012, the NHTSA established final passenger car and light truck CAFE standards for model years 2017 through 2021, which the agency projects will require in model year 2021, on average, a combined fleet-wide fuel economy of 40.3 to 41.0 miles per gallons (mpg). In March 2020, the United States Department of Transportation (USDOT) and the USEPA issued the final Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which amends existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establishes new standards covering model years 2021 through 2026.<sup>18</sup>

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type.<sup>19</sup> USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through

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17 CEC, Final 2019 Integrated Energy Policy Report, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report>. Accessed April 2021.

18 National Highway Traffic Safety Administration (NHTSA), Corporate Average Fuel Economy standards, <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>. Accessed April 2021.

19 United States Environmental Protection Agency (USEPA), Fact Sheet: EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles, August 2011, <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100BOT1.PDF?Dockkey=P100BOT1.PDF>. Accessed April 2021.

2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.<sup>20</sup>

## State Setting

### ***State Senate Bill 1389***

Senate Bill (SB) 1389 (PRC Sections 25300–25323; SB 1389) requires the development of an integrated plan for electricity, natural gas, and transportation fuels. The CEC must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every two years. The CEC prepares updates to these assessments and associated policy recommendations in alternate years (PRC Section 25302[d]). Preparation of the Integrated Energy Policy Report involves close collaboration with federal, State, and local agencies and a wide variety of stakeholders in an extensive public process to identify critical energy issues and develop strategies to address those issues. The most recently approved report and update, the 2019 Integrated Energy Policy Report Update, addresses the State’s implementation of SB 350, integrated resource planning, distributed energy resources, transportation electrification, electricity system resilience and efficiency, barriers faced by disadvantaged communities, demand response, renewable energy, natural gas supplies, preliminary transportation energy demand forecast, and climate adaptation and resiliency.<sup>21</sup> In March 2021, the CEC released a Scoping Order for the 2021 Integrated Energy Policy Report.<sup>22</sup>

### ***Renewables Portfolio Standard***

As amended by SB 350, California’s Renewables Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 40 percent of total retail sales by 2024, 45 percent of total retail sales by 2027, and 50 percent of total retail sales by 2030. SB 100, signed on September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California’s RPS and SB 350 to the following: achieve 50 percent renewable resources target by December 31, 2026 and achieve a 60 percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045.

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20 USEPA, Federal Register/Vol. 81, No. 206/Tuesday, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, October 25, 2016, <https://www.gpo.gov/fdsys/pkg/FR-2016-10-25/pdf/2016-21203.pdf>. Accessed April 2021.

21 CEC, Final 2019 Integrated Energy Policy Report, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report>. Accessed April 2021.

22 CEC, Scoping Order for the 2021 Integrated Energy Policy Report, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report>. Accessed April 2021.

SB 100 requires the CEC, California Public Utilities Commission (CPUC), and California Air Resources Board (CARB) to complete a joint agency report to the Legislature evaluating the 100 percent zero-carbon electricity policy. In consultation with all California balancing authorities and as part of a public process, the three agencies will issue a report to the Legislature by January 1, 2021, and at least every four years afterward. The joint report shall include: (1) a review of the 100 percent zero-carbon policy focused on technologies, forecasts, then-existing transmission, and the maintenance of safety, environmental and public safety protection, affordability, and system and local reliability; (2) an evaluation identifying the potential benefits and impacts on system and local reliability associated with achieving the policy; (3) an evaluation identifying the nature of any anticipated financial costs and benefits to electric, gas, and water utilities, including customer rate impacts and benefits; (4) the barriers to, and benefits of, achieving the policy; and (5) alternative scenarios in which the policy can be achieved and the estimated costs and benefits of each scenario.

### ***California's Energy Efficiency Standards for Residential and Nonresidential Buildings***

Part 6 of Title 24 of the CCR, regulates the design of building shells and building components. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The CEC published the 2019 California Building Standards Code (Cal. Code Regs., Title 24) July 1, 2019, with an effective date of January 1, 2020.<sup>23</sup>

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24), commonly referred to as CALGreen, establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. CALGreen is periodically amended; the most recent 2019 standards became effective on January 1, 2020.

The CEC periodically amends and enforces Appliance Efficiency Regulations contained in Title 20 of the CCR. The regulations establish water and energy efficiency standards for both federally regulated appliances and non-federally regulated appliances. The most current Appliance Efficiency Regulations, dated January 2019 cover 23 categories of appliances (e.g., refrigerators; plumbing fixtures; dishwashers; clothes washer and dryers; televisions, etc.) and apply to appliances offered for sale in California.<sup>24</sup>

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23 CEC, 2019 Building Energy Efficiency Standards, <https://www.energy.ca.gov/title24/2019standards/>. Accessed April 2021.

24 CEC, Appliance Efficiency Standards Scheduled to Take Effect in 2019, <http://calenergycommission.blogspot.com/2018/12/appliance-efficiency-standards.html>. Accessed April 2021.

## ***Transportation Sector Energy Related Regulations***

**Section IV.G: Greenhouse Gas Emissions** of this Draft EIR discusses various statutes that address climate change, which also address energy generation and consumption. As expressed in these statutes, meeting the State’s climate change goals requires focused action to quickly transform the State’s energy system away from fuels that generate GHGs. The following statutes direct various State agencies to conduct assessments and forecasts that are used to develop recommendations for energy policies and programs that conserve State resources, provide reliable energy, protect the environment, enhance the State’s economy, and protect public health and safety.

The State has provided a climate policy portfolio that addresses emissions across sectors including electricity, buildings, transportation, land use and agriculture, and industry. The transportation sector is the largest source of GHG emissions in the State and various State policies call for speeding the transition to zero-emission vehicles (ZEVs), which among other things reduce energy use, including:

- The CARB’s Scoping Plan, which describes California’s approach for achieving its GHG reduction goals. The plan was developed in 2008 and updated in 2014 and 2017;
- Executive Order B-16-2012 set a goal of reaching 1.5 million ZEVs on California roadways by 2025; and
- Executive Order B-48-18 calls for at least 5 million ZEVs on California roads by 2030 and spurs the installation of 250,000 plug-in electric vehicle chargers, including 10,000 direct fast current chargers, and 200 hydrogen refueling stations by 2025.

Executive Order B-55-18 established a Statewide goal to achieve carbon neutrality by 2045. Although these statutes are broader than the energy sector, reducing GHG emissions from California’s energy system, including transportation, is a fundamental part of the effort to reduce reliance on fossil fuels.

Other State regulations that indirectly reduce fuel consumption include:

- AB 1493 (Pavley, 2002), which required CARB to adopt regulations to reduce GHG emissions from noncommercial passenger vehicles and light-duty trucks for model years 2009–2016.<sup>25</sup>
- EO S-1-07, as issued by Governor Schwarzenegger, called for a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB by 2020.<sup>26</sup>

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25 California Air Resources Board (CARB), Clean Car Standards—Pavley, Assembly Bill 1943, [www.arb.ca.gov/cc/ccms/ccms.htm](http://www.arb.ca.gov/cc/ccms/ccms.htm). Accessed April 2021.

26 Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the “lifecycle” of a transportation fuel.

### **Executive Order S-03-05**

Executive Order S-03-05 mandates that California emit 80 percent fewer GHGs in 2050 than it emitted in 1990. Energy efficiency and reduced vehicle miles traveled (VMT) would play important roles in achieving this goal. As previously mentioned, GHG reduction efforts increase energy efficiency which also reduces the consumption of petroleum-based fuels.

### **California Air Resources Board**

In 2012, CARB approved the Advanced Clean Cars (ACC) program, an emissions-control program for passenger vehicles and light-duty trucks for model years 2017–2025, thereby continuing the regulatory framework established under the Pavley standards beyond model year 2016. The program combines the control of smog, soot, and GHG emissions with requirements for greater numbers of zero-emission vehicles. The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the ZEV regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.<sup>27</sup> Consistent with the other State-reduction policies geared toward reducing GHG emissions, the efforts to speed up integration of ZEVs and PHEVs would reduce the consumption of petroleum based fuels.

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13, CCR Division 3, Chapter 10, Section 2435) was adopted to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. This section applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. Reducing idling of diesel-fueled commercial motor vehicles reduces the amount of petroleum-based fuel used by this class of vehicles.

The Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen, and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles (Title 13, CCR Division 3, Chapter 1, Section 2025) was adopted to reduce emissions of diesel particulate matter, oxides of nitrogen (NOx) and other criteria pollutants from in-use diesel-fueled vehicles. This regulation is phased, with full implementation by 2023 with compliance resulting in this class of vehicles using petroleum-based fuel in a more efficient manner thereby reducing diesel fuel consumption.

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27 CARB, California's Advanced Clean Cars Program, [www.arb.ca.gov/msprog/acc/acc.htm](http://www.arb.ca.gov/msprog/acc/acc.htm). Accessed April 2021.

CARB is responsible for enforcing CCR Title 13 Sections 2449(d)(3) and 2485, which limit idling from both on-road and off-road diesel-powered equipment to no greater than five minutes at any location. Reducing idling of diesel-fueled commercial motor vehicles reduces the amount of petroleum-based fuel used by the vehicle.

### ***Sustainable Communities Strategy***

SB 375, the Sustainable Communities and Climate Protection Act, coordinates land use planning, regional transportation plans, and funding priorities to reduce GHG emissions from passenger vehicles through better-integrated regional transportation, land use, and housing planning that provides easier access to jobs, services, public transit, and active transportation options. These actions achieve their objectives in part through increased energy efficiency. Specific to energy conservation, electric vehicles, natural gas vehicles, transit/rail; more compact development patterns that reduce vehicle travel also demand less energy per capita. Reducing vehicle travel also reduces energy related to producing and distributing fuels and vehicles as well as the construction and maintenance of roads.

### ***California Environmental Quality Act***

In accordance with Appendix F and G of the CEQA Guidelines, and in order to ensure that energy implications are considered in project decisions, EIRs are required to include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (PRC Section 21100(b)(3)). The 2020 update to Appendix G of the CEQA Guidelines now provides that if a project would result in potentially significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a State or local plan for renewable energy or energy efficiency, then an EIR shall be prepared for the project that includes mitigation measures for that energy use. The EIR's analysis should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project as further described below under Appendix F of the CEQA Guidelines.

Appendix F of the CEQA Guidelines provides a list of energy-related topics that may be discussed in an EIR, where topics are applicable or relevant to the project, including:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;

- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

## Regional and Local Setting

### *Southern California Association of Governments*

SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) presents a long-term transportation vision through the year 2040 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties.<sup>28</sup> The 2016 RTP/SCS includes land use strategies that focus on urban infill growth and walkable, mixed-use communities in existing urbanized and opportunity areas. More mixed-use, walkable, and urban infill development would be expected to accommodate a higher proportion of growth in more energy-efficient housing types like townhomes, apartments, and smaller single-family homes, as well as more compact commercial building types. More compact development patterns that reduce vehicle travel also demand less water per capita and reduce conversion of natural and working lands. Furthermore, the 2016 RTP/SCS includes transportation investments and land use strategies that encourage carpooling, increase transit use, active transportation opportunities, and promote more walkable and mixed-use communities, which would potentially help to reduce vehicle travel, ultimately reducing the consumption of petroleum-based fuels and the energy demands necessary for producing and distributing fuels and vehicles, as well as the construction and maintenance of roads.

SCAG has also released the 2020-2045 RTP/SCS (Connect SoCal), on November 14, 2019 for public input and comment and closed on the comment period on January 24, 2020. On September 3, 2020, SCAG's Regional Council approved and adopted the Connect SoCal plan which, similar to the 2016-2040 RTP/SCS, sets forth goals, policies, and programs intended to reduce GHG emissions, improve active transportation, and promote development near existing transportation networks. The 2020-2045 RTP/SCS focuses on a

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28 Southern California Association of Governments (SCAG), 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, <http://scagrtpscsc.net/Pages/FINAL2016RTPSCS.aspx>. Accessed April 2021.

more prosperous mobile approach through implementing planning strategies that focus on transportation networks.<sup>29</sup>

## Local Setting

### ***City of Long Beach General Plan***

The Air Quality Element of the City of Long Beach General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. This Element includes the following energy related goals and policies which are applicable to the Project.

**Goal 7:** Reduce emissions through reduced energy consumption.

**Policy 7.1:** Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

**Action 7.1.4:** Encourage the incorporation of energy conservation features in the design of all new construction.

### ***City of Long Beach Municipal Code***

Section 21.45.400 of the Long Beach Municipal Code (LBMC) further regulates public and private development to include various standards that promote green buildings. A green building, also known as a sustainable building, is a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water, and other resources more efficiently; and reducing the overall impact on the environment. The City of Long Beach recognizes the benefit of green buildings and establishes a green building program.

### ***City of Long Beach Green Building Ordinance***

On May 12, 2009, the Long Beach City Council approved Ordinance No. ORD- 09-0013 (Subsection 21.45.400—Green Building Standards for Public and Private Development). The following types of project shall meet the intent of the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED®) program at the Certified level:

- A new residential or mixed use building of 50 dwelling units and 50,000 gross square feet or more.
- A new mixed use, or non-residential building of 50,000 square feet or more of gross floor area;

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<sup>29</sup> Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Draft, Chapter 1, <https://scag.ca.gov/connect-socal>. Accessed April 2021.

- The alteration of an existing residential or mixed use building that results in the addition of 50 dwelling units and 50,000 gross square feet or more;
- The alteration of an existing mixed use, or non-residential building that results in the expansion of 50,000 gross square feet or more; and
- A new construction or substantial rehabilitation project for which the City provides any portion of funding.

#### 4. ENVIRONMENTAL IMPACTS

##### *Thresholds of Significance*

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to energy if it would:

**Threshold ENE-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

**Threshold ENE-2: Conflict with or obstruct a State or local plan for renewal energy or energy efficiency?**

#### 5. METHODOLOGY

##### **Construction**

Electricity usage associated with the supply and conveyance of water used for dust control during construction was calculated using CalEEMod. Developed by the California Air Pollution Control Officers Association (CAPCOA), CalEEMod is a Statewide land use emissions computer model that estimates construction and operational emissions from a variety of land use projects.<sup>30</sup> This section utilizes the GHG worksheets and CalEEMod output data found in **Appendix IV.B.1** to this Draft EIR. Electricity used to power lighting, electronic equipment, and other construction activities necessitating electrical power would be temporary, limited, and would cease upon the completion of construction. In terms of natural gas, construction activities typically do not involve the consumption of natural gas, and, as such, natural gas consumption associated with construction activities was assumed to be negligible.

Fuel consumption from on-site off-road heavy-duty construction equipment was calculated based on the equipment mix and usage factors provided in the CalEEMod construction output files included in **Appendix**

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30 California Air Pollution Control Officers Association, CalEEMod (2017), Accessed May 2020, <http://www.caleemod.com>.

**IV.G.1** of this Draft EIR. The total horsepower was then multiplied by fuel usage estimates per horsepower-hour included in Table A9-3-E of the South Coast Air Quality Management District's (SCAQMD) CEQA Air Quality Handbook. Fuel consumption from construction worker, vendor, and delivery trucks was calculated using the trip rates and distances provided in the CalEEMod construction output files. Total VMT was then calculated for each type of construction-related trip and divided by the corresponding county-specific miles per gallon factor using CARB's EMFAC 2017 model, which provides the total annual VMT and fuel consumed for each vehicle type. Consistent with CalEEMod, construction worker trips were assumed to include 50 percent light duty gasoline automobiles and 50 percent light duty gasoline trucks. Construction vendor and delivery trucks were assumed to be heavy-duty diesel trucks. Refer to **Appendix IV.E.1** of this EIR for detailed calculations.

## Operation

The Project's potential energy consumption analyzed the anticipated future demand of the proposed uses. The Project's anticipated electricity and natural gas demands during operation are based in the CalEEMod output data found in Appendix G to this Draft EIR. Potential petroleum impacts are associated with operational vehicle trips. Daily trip generation used in this analysis was based on the air quality worksheets and CalEEMod output data found in **Appendix IV.G.1** to this Draft EIR. Because CalEEMod does not directly estimate fuel consumption, fuel rate and VMT data from CARB's EMFAC 2017 model were used to develop fuel-efficiency factors for gasoline and diesel fuel, in units of miles per gallon. Based on the Project's annual VMT forecast, gasoline and diesel consumption rates were calculated using the County-specific miles per gallon based on the EMFAC 2017 model. Trip rate and trip length data from CalEEMod were used to estimate the total VMT of on-road motor vehicles that would occur from operational uses. The fuel-efficiency factors were applied to the estimated VMT to determine the quantity of gasoline and diesel that would be used annually. The vehicle fleet mix for vehicles anticipated to visit the Project Site was calculated based on the EMFAC 2017 model for the County and was anticipated to be 93 percent gasoline and 7 percent diesel fuel. Supporting calculations are provided in **Appendix IV.E.1** of this Draft EIR. These calculations were used to determine if the proposed Project would cause the wasteful, inefficient and/or unnecessary consumption of energy as required by Appendix F of the CEQA Guidelines

## 6. PROJECT IMPACTS

**Threshold ENE-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

As discussed previously, the proposed Project would consume energy during construction and operational activities. Sources of energy for these activities include electricity usage, natural gas consumption, and

transportation fuels such as diesel and gasoline. The analysis below includes the Project's energy requirements and energy use efficiencies by fuel type for Project construction and operations. For purposes of this analysis, Project maintenance would include activities such as painting, landscaping, and architectural coatings. Energy usage related to Project maintenance activities are included as part of Project operations.

### **Construction Impacts**

During construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control, and on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. As discussed below, construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment within the Project Site, construction worker travel, haul trips, and delivery trips.

As shown in **Table IV.E-1: Summary of Energy Use During Construction** and discussed below, a total of approximately 5,816 kilowatt-hours (kWh) of electricity, 601,083 gallons of diesel fuel, and 167,306 gallons of gasoline is estimated to be consumed during construction of the proposed Project.

**Table IV.E-1  
Summary of Energy Use During Construction**

Fuel Type	Quantity
<b>Electricity</b>	<b>5,816 kWh</b>
<b>Diesel</b>	
Off-Road Construction Equipment <sup>man</sup>	156,812 gallons
On-Road Construction Equipment <sup>b</sup>	444,270 gallons
<b>Total</b>	<b>601,083 gallons</b>
<b>Gasoline</b>	
Off-Road Construction Equipment <sup>a</sup>	0 gallons
On-Road Construction Equipment <sup>b</sup>	167,306 gallons
<b>Total</b>	<b>167,306 gallons</b>

Source: Refer to **Appendix IV.E.1** for detailed calculations.

<sup>a</sup> Off-road construction equipment encompasses construction equipment on the project site (e.g., excavators, cranes, forklifts, etc.).

<sup>b</sup> On-road construction equipment encompasses construction worker trips, haul trips, and delivery trips.

## **Electricity**

During construction, electricity would be consumed to supply and convey water for dust control and, on a limited basis, may be used to power lighting, electronic equipment, and other construction activities necessitating electrical power. Electricity would be supplied to the Project Site by SCE distribution infrastructure and would be obtained from existing substations and electrical lines in and around the Project Site.

As shown in **Table IV.E-1**, a total of approximately 5,816 kWh of electricity is anticipated to be consumed during construction. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Additionally, Title 24 requirements would apply to construction lighting if duration were to exceed 120 days, which includes limits on the wattage allowed per specified area for energy conservation. Due to the relatively short duration of the construction process, and the fact that the extent of electricity consumption is inherent to construction projects of this size and nature, electricity consumption impacts would not be considered excessive or substantial with respect to regional supplies. Therefore, construction of the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of electricity and impacts would be less than significant.

## **Natural Gas**

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would likely not be needed to support construction activities; thus, there would be little to no demand generated by construction. Therefore, construction of the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of natural gas and impacts would be less than significant.

## **Transportation Energy**

Project construction would consume energy in the form of petroleum-based fuels associated with use of off-road construction vehicles and equipment on the Project Site, construction worker travel to and from the Project Site, and delivery and haul truck trips (e.g., for deliveries of construction supplies and materials).

The petroleum-based fuel use summary provided in **Table IV.E-1** represents the amount of transportation energy that could potentially be consumed during construction based on a conservative set of assumptions. As shown, on- and off-road vehicles would consume an estimated 768,388 gallons of petroleum (167,306 gallons of gasoline and 601,083 gallons of diesel fuel) throughout the proposed

Project's construction period. For purposes of comparison, the EIA forecasts a national oil supply of 20.39 million barrels (mb) per day in 2022, which is the first year of construction for the proposed Project.<sup>31</sup> This equates to approximately 7,472 mb per year or 312,579 million gallons (mg) per year. Construction of the proposed Project would account for less than 0.01 percent of the projected annual oil supply in 2022.

Due to the relatively short duration of the construction process, and the fact that the extent of fuel consumption is inherent to construction projects of this size and nature, fuel consumption impacts would not be considered excessive or substantial with respect to regional fuel supplies. The energy demands during construction would be typical of construction projects of this size and would not necessitate additional energy facilities or distribution infrastructure. The proposed Project will also comply with Sections 2485 in Title 13 of the California Code of Regulations, which requires the idling of all diesel-fueled, commercial vehicles be limited to five minutes at any location. As a result, the proposed Project would not result in inefficient, or unnecessary consumption of transportation resources during construction. Accordingly, transportation resource demands during construction would be less than significant.

### **Operation**

During operation of the Project, energy would be consumed for multiple purposes associated with the proposed residential uses, including, but not limited to, heating/ventilating/air conditioning (HVAC); refrigeration; lighting; and the use of electronics, equipment, and machinery. Energy would also be consumed during operation of the proposed Project in the form of water usage, solid waste disposal, and vehicle trips, among others. As shown in **Table IV.E-2: Summary of Annual Energy Use During Operation**, the Project's energy demand would be approximately 1,521,158 kWh of electricity per year and 4,298,930 kBtu per year or 11,358 cf (0.01 MMcf) per day.<sup>32</sup> The proposed uses would consume 33,296 gallons of diesel fuel per year and 195,813 gallons of gasoline per year. These calculations incorporate regulatory requirements established by the California Building Code related to water and energy conservation, water quality, and green building practices including the City's requirement for LEED certification.

### **Electricity**

As shown in **Table IV.E-2**, buildout of the proposed Project would result in a projected increase in the on-site demand for electricity, totaling 1,521,158 kWh (1.5 GWh) per year. SCE estimates that electricity consumption within its planning area will be approximately 125,000 GWh annually by 2027, when the

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31 EIA, Annual Energy Outlook 2020: Table 11. Petroleum and Other Liquids Supply and Disposition, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=11-AEO2020&cases=ref2020&sourcekey=0>, Accessed April 2021.

32 The conversion of kBtu to cubic feet uses the factor of 1 cf to 1.037 kBtu. Based on 365 days per year.

proposed Project would be fully built out.<sup>33</sup> The proposed Project would account for less than 0.01 percent of the 2027 annual consumption in SCE's planning area.<sup>34</sup>

**Table IV.E-2**  
**Summary of Annual Energy Use During Operation**

Source	Units	Quantity
<b>Electricity</b>		
Condo/Townhouses	kWh/yr	597,175
Single-Family Residences	kWh/yr	569,247
Parking Areas	kWh/yr	60,069
Water	kWh/yr	294,866
<b>Electricity Total</b>	<b>kWh/yr</b>	<b>1,521,158</b>
<b>Natural Gas</b>		
Condo/Townhouses	kBTU/yr	2,412,520
Single-Family Residences	kBTU/yr	1,886,410
<b>Natural Gas Total</b>	<b>kBTU/yr</b>	<b>4,298,930</b>
<b>Mobile</b>		
Diesel	Gallons/yr	33,296
Gasoline	Gallons/yr	195,813
<b>Fuel Total</b>	<b>Gallons/yr</b>	<b>229,110</b>

Source: Refer to **Appendix IV.E.1** for detailed calculations.

Notes: kWh/yr = kilowatt-hours per year; kBTU/yr = thousand British Thermal Units per year.

Electricity and Natural Gas for the proposed Project is total yearly operational usage. Mobile gasoline and diesel usage were calculated using CalEEMod output data

In addition to complying with Title 24 and CALGreen, the proposed Project would provide means for indirect energy savings, such as permitting individual solar panels to be applied to the proposed residential uses. This would be installed in compliance with Title 24 Section 110.10, which includes mandatory regulations for solar-ready buildings and would not preclude the use of alternate energy sources. Moreover, consistent with Section 21.45.400 of the LBMC, the proposed Project would be required to meet the LEED® program at the certified level and comply with the City's green building program. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water, and other resources more efficiently; and reducing the overall impact to

33 CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, <https://efiling.energy.ca.gov/getdocument.aspx?tn=223244>. Accessed April 2021.

34  $1.5 \text{ GWh} / 125,000 \text{ GWh} = 0.000012$

the environment. Therefore, operation of the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of electricity and impacts would be less than significant.

### **Natural Gas**

As shown in **Table IV.E-2**, with compliance with Title 24 standards and applicable CALGreen requirements, buildout of the proposed Project is projected to generate an on-site demand for natural gas totaling 4,298,930 kBtu per year or 11,358 cf (0.01 MMcf) per day.<sup>35</sup> Based on the 2020 California Gas Report, LBER is expected to supply 26.3 MMcf of natural gas per day in 2027, when the proposed Project would be fully built out.<sup>36</sup> The proposed Project would account for approximately 0.03 percent of the 2027 daily forecasted consumption in LBER's planning area. As previously mentioned, LEED certification is required within the City and measures such as submetering would be implemented to detect any sudden fluctuations of natural gas use. New appliances using natural gas would be efficient and reduce unnecessary and wasteful consumption of natural gas during operation. Therefore, operation of the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of natural gas and impacts would be less than significant.

### **Transportation Energy**

As shown in **Table IV.E-2** above, buildout of the proposed Project is projected to generate a net demand of 229,110 gallons of transportation fuel. For purposes of comparison, the EIA forecasts a national oil supply of 19.9 mb/d in 2027, which is the opening year for the Project.<sup>37</sup> This equates to approximately 7,263 mb/y or 305,067 mg/y.<sup>38</sup> Operation of the proposed Project would account for less than 0.01 percent of the projected annual oil supply in 2027.

During operation, traffic associated with the proposed Project would result in the consumption of petroleum-based fuels due to vehicular travel to and from the Project Site. Vehicular use during operation would be limited to those necessary to ensure the function of the residential and open space developments, including trash pickup, commutes by employees of the development, commutes by regular upkeep and repair crews, and commutes by USPS personnel. Activities such as trash pickup would be consolidated to limit the number of necessary trips made by local waste collectors. During the operational lifetime of the Project, newer vehicles sold on the market would be required to comply with CAFE fuel economy standards expected to incrementally take effect. This would effectively reduce transportation

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35 The conversion of kBtu to cubic feet uses the factor of 1 cf to 1.037 kBtu. Based on 365 days per year.

36 California Public Utilities Commission, 2020 California Gas Report, [https://www.socalgas.com/sites/default/files/2020-10/2020\\_California\\_Gas\\_Report\\_Joint\\_Utility\\_Biennial\\_Comprehensive\\_Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf). Accessed April 2021.

37 U.S. EIA, Annual Energy Outlook 2020, Table 11. Petroleum and Other Liquids Supply and Disposition, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=11-AEO2020&cases=ref2020&sourcekey=0>. Accessed April 2021.

38 One oil barrel is equivalent to 42 gallons.

energy use by commuters and maintenance crew at the development. Accordingly, fuel consumption is anticipated to decrease each year through implementation of regulation that require higher energy efficiencies and higher efficient and alternative fueled vehicles. As the operation activities would be limited to those necessary for the function and upkeep for the development, and more efficient vehicles are expected in future years of Project operation, the proposed Project would not result in wasteful, inefficient, or unnecessary consumption of transportation energy and impacts would be less than significant.

### ***Summary of Energy Resource Consumption***

CEQA Guidelines Appendix F recommends a quantification of the Project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the Project's life cycle, including construction, operation, maintenance, and/or removal. The proposed Project's energy requirements were calculated based on land use inputs from CalEEMod for electricity and natural gas usage. The calculations also considered energy efficiency measures, such as Title 24, 2016 CALGreen, and vehicle fuel economy standards. As energy consumption during Project construction activities would be relatively negligible, the proposed Project is not anticipated to affect regional energy consumption in years during the construction period. In sum, energy consumption during Project construction and operations in the context of regional supplies would be relatively negligible and energy requirements are within SCE's and LBER's forecasted supply delivery capacity. Additionally, electricity demand during construction and operation of the proposed Project would have a negligible effect on the overall capacity of SCE's power grid base peak demand conditions and LBER's forecasted demand. Moreover, the proposed Project's gas and diesel fuel demand related to vehicle travel and on-site operations would account for a small percentage of the forecasted gas and diesel consumption.

Furthermore, these forecasts of energy consumption are likely to overstate actual Project consumption as it is anticipated that the recent trend of stricter regulatory requirements with regard to energy efficiency that have occurred over the last twenty years would continue through buildout of the proposed Project, such as more energy efficient Title 24 requirements, as well as energy efficiency requirements related to achieving the SB 350 goals to double energy efficiency standards by the year 2030, that would occur throughout the construction and operation of the proposed Project. As electricity and natural gas usage at the Project Site would comply with Title 24 standards as well as CalGreen and the City's green building program requirements, proposed Project construction and operations would comply with applicable energy standards with regards to electricity and natural gas usage.

With regards to transportation fuels, trucks and equipment used during proposed construction activities would comply with CARB's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets

regulation. Although these regulations are focused on reducing criteria pollutant emissions, compliance with these regulations would also result in a more efficient use of construction-related fuel consumption. In addition, during Project operations, vehicles traveling to and from the Project Site would comply with CAFE fuel economy standards as well as with Pavley standards and LCFS, which are designed to reduce vehicle GHG emissions but would also result in fuel savings in addition to CAFE standards. Therefore, Project construction and operational activities would comply with existing energy standards with regards to transportation fuel consumption.

In terms of transportation-related energy usage, the proposed Project would be consistent with the energy efficiency policies emphasized by the 2016-2040 RTP/SCS and the 2020-2045 RTP/SCS. Specifically, the proposed Project would provide housing in close proximity to a major transit stop at Wardlow Road and Pacific Place; the LA Metro Blue Line (or A Line) Wardlow station. Moreover, LBT and LA Metro provide public transit services in the vicinity of the Project Site. The proposed Project would include 5 acres of public open space that would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails. Additionally, the proposed Project would include bike parking consistent with the City's Bicycle Master Plan. These features would serve to reduce VMT and associated transportation fuel consumption. During the operational lifetime of the Project, newer vehicles sold on the market would be required to comply with CAFE fuel economy standards expected to incrementally take effect. Accordingly, fuel consumption is anticipated to decrease each year through implementation of regulations that require higher energy efficiencies and higher efficient and alternative fueled vehicles.

As discussed throughout this Draft EIR, the proposed Project is consistent with the City's General Plan and also in proximity to a major transit stop. As a result, these locational attributes create opportunities for reductions in both the number and length of vehicle trips. Further, the proposed Project's pedestrian and bicycle improvements would reduce vehicle trips and vehicle miles traveled. These reductions in vehicle trips and vehicle miles traveled would also reduce the proposed Project's gas and diesel fuel consumption. As such, the proposed Project would encourage the use of efficient transportation alternatives.

As demonstrated in the analysis of the discussed above, the proposed Project would not cause wasteful, inefficient, and unnecessary consumption of energy during construction or operation.

**Threshold ENE-2: Conflict with or obstruct a State or local plan for renewal energy or energy efficiency?**

The proposed Project would comply with applicable regulatory requirements for the design of new buildings, including the provisions set forth in the CALGreen Code and California's Building Energy

Efficiency Standards, which have been incorporated into the City's green building program. Based on the below, the proposed Project would be consistent with adopted energy conservation plans and impacts would be less than significant.

### ***Consistency with General Plan Air Quality Element***

The Air Quality Element of the City of Long Beach General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. This Element includes the following energy related goals and policies which are applicable to the Project.

**Goal 7:** Reduce emissions through reduced energy consumption.

**Policy 7.1:** Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

**Action 7.1.4:** Encourage the incorporation of energy conservation features in the design of all new construction.

The proposed Project would be required to comply with the most recent Title 24 standards and the CalGreen Code. In addition to complying with Title 24 and CALGreen, the proposed Project would provide means for indirect energy savings, such as permitting individual solar panels to be applied to the proposed residential uses. This would be installed in compliance with Title 24 Section 110.10, which includes mandatory regulations for solar-ready buildings and would not preclude the use of alternate energy sources. Moreover, consistent with Section 21.45.400 of the LBMC, the proposed Project would be required to meet the LEED® program at the certified level and comply with the City's green building program. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water, and other resources more efficiently; and reducing the overall impact to the environment.

The Project Site is located within 0.5-mile of the major transit stop at Wardlow Road and Pacific Place; the LA Metro Blue Line (or A Line) Wardlow station. Moreover, LBT and LA Metro provide public transit services in the vicinity of the Project Site. The proposed Project would include 5 acres of public open space that would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails. Additionally, the proposed Project would include bike parking consistent with the City's Bicycle Master Plan. The location of the proposed Project encourages a variety of transportation options which would reduce VMTs and transportation-related fuel. As such, the

proposed Project would not conflict with the energy goals and policies in the General Plan's Air Quality Element.

### ***Consistency with SCAG's 2016-2040 RTP/SCS and 2020-2045 RTP/SCS***

As discussed in the Project's Initial Study (see **Appendix I.1**) the proposed Project is expected to result in an increase of approximately 624 residents. According to the growth estimates from SCAG's 2016–2040 RTP/SCS, the City had an estimated population of 466,300 people in 2012 and is projected to have a population of 484,500 in 2040.<sup>39</sup> The addition of 624 people generated by the proposed Project would be approximately 3 percent of the SCAG's 2016–2040 population increase forecast for the City. Such levels of growth are consistent with the population forecasts for the subregion as adopted by SCAG. The proposed Project is also consistent with the types, intensity and patterns of land use envisioned for this region.

Additionally, the proposed Project would be consistent with SCAG's 2016-2040 SCS/RTP and 2020-2045 SCS/RTP goals, objectives, and policies which directly and indirectly relate to energy conservation, such as encouraging energy efficiency where possible and encouraging land use and growth patterns that facilitate transit and active transportation, respectively. In terms of transportation-related energy conservation, the proposed Project would be consistent with the energy efficiency policies emphasized by both the 2016-2040 RTP/SCS and 2020-2045 RTP/SCS. The proposed Project includes the development of residential uses in an area already served by transit. Additionally, the proposed Project would include bike parking consistent with the City's Bicycle Master Plan. The location of the proposed Project encourages a variety of transportation options which would reduce VMTs and transportation-related fuel. During the operational lifetime of the proposed Project, newer vehicles sold on the market would be required to comply with CAFE fuel economy standards expected to incrementally take effect. As such, the proposed Project would not conflict with the energy goals and policies in SCAG's 2016-2040 SCS/RTP and 2020-2045 SCS/RTP.

## **7. CUMULATIVE IMPACTS**

### **Electricity**

Buildout of the proposed Project, related projects, and additional forecasted growth in SCE's service area would cumulatively increase the demand for electricity supplies and infrastructure capacity. As discussed previously, a total of approximately 5,816 kWh of electricity is anticipated to be consumed during construction of the proposed Project. Due to the relatively short duration of the construction process, and the fact that the extent of electricity consumption is inherent to construction projects of this size and

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<sup>39</sup> SCAG, Demographics and Growth Forecast, [https://scag.ca.gov/sites/main/files/file-attachments/f2016rtppscs\\_demographicsgrowthforecast.pdf?1606073557](https://scag.ca.gov/sites/main/files/file-attachments/f2016rtppscs_demographicsgrowthforecast.pdf?1606073557). Accessed April 2021.

nature, electricity consumption impacts would not be considered excessive or substantial with respect to regional supplies. Moreover, SCE estimates that electricity consumption within its planning area will be approximately 125,000 GWh annually by 2027, when the proposed Project would be fully built out.<sup>40</sup> The proposed Project would account for less than 0.01 percent of the 2027 annual consumption in SCE's planning area.<sup>41</sup>

As previously discussed, the Project is consistent with the population forecasts for the subregion as adopted by SCAG which has been utilized in future planning documents for the SCE service area. Additionally, Project operational activities would be within the demand forecast for the SCE service area. Although development of the proposed Project would result in the use of electricity resources during construction and operation, which could limit future availability, the use of such resources would be on a relatively small scale when compared to regional consumption, and would be reduced through compliance with the latest CALGreen code requirements. Furthermore, as with the proposed Project, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate energy design features, as necessary during construction and operation. Therefore, the proposed Project's contribution to cumulative impacts related to wasteful, inefficient, and unnecessary use of electricity would not be cumulatively considerable and, thus, cumulative construction and operation-related electricity impacts would be less than significant.

## Natural Gas

Buildout of the proposed Project, related projects, and additional forecasted growth in SoCalGas service area would cumulatively increase the demand for natural gas supplies and infrastructure capacity. Based on the 2020 California Gas Report, LBER is expected to supply 26.3 MMcf of natural gas per day in 2027, when the Project would be fully built out.<sup>42</sup> The proposed Project would account for approximately 0.03 percent of the 2027 daily forecasted consumption in LBER's planning area. Natural gas would likely not be needed to support construction activities.

Although development of the proposed Project would result in the use of natural gas resources, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures rendering the proposed Project more energy efficient, consistent with growth expectations for the LBER service area. Furthermore, future development projects would be expected to

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40 CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, <https://efiling.energy.ca.gov/getdocument.aspx?tn=223244>. Accessed April 2021.

41  $1.5 \text{ GWh} / 125,000 \text{ GWh} = 0.000012$

42 California Public Utilities Commission, 2020 California Gas Report, [https://www.socalgas.com/sites/default/files/2020-10/2020\\_California\\_Gas\\_Report\\_Joint\\_Utility\\_Biennial\\_Comprehensive\\_Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf). Accessed April 2021.

incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary. Therefore, the proposed Project's contribution to cumulative impacts related to wasteful, inefficient, and unnecessary use of natural gas would not be cumulatively considerable; thus, cumulative construction and operation-related natural gas consumption impacts would be less than significant.

## Petroleum-Based Fuels

Buildout of the proposed Project, related projects, and additional forecasted growth would cumulatively increase the demand for transportation-related fuel in the State and region. The EIA forecasts a national oil supply of 19.9 mb/d in 2027, which is the opening year for the proposed Project.<sup>43</sup> This equates to approximately 7,263 mb/y or 305,067 mg/y.<sup>44</sup> Operation of the proposed Project would account for less than 0.01 percent of the projected annual oil supply in 2027.

During the operational lifetime of the proposed Project and related projects, newer vehicles sold on the market would be required to comply with CAFE fuel economy standards expected to incrementally take effect. This would effectively reduce transportation energy use by commuters and maintenance crew at the development. Accordingly, fuel consumption is anticipated to decrease each year through implementation of regulation that require higher energy efficiencies and higher efficient and alternative fueled vehicles. Therefore, the proposed Project's contribution to cumulative impacts related to wasteful, inefficient, and unnecessary use of transportation-related fuel would not be cumulatively considerable; thus, cumulative construction and operation-related transportation fuel consumption impacts would be less than significant.

The proposed Project's contribution to cumulative impacts related to energy infrastructure (i.e., electricity and natural gas) would not be cumulatively considerable related to the surrounding energy infrastructure during Project operations. As such, the proposed Project's cumulative energy impacts are concluded to be less than significant.

## Consistency Analysis

the proposed Project would be consistent with the population forecasts for the subregion as adopted by SCAG. The proposed Project would be required to comply with the most recent Title 24 standards and the CalGreen Code. In addition to complying with Title 24 and CALGreen, the proposed Project would provide means for indirect energy savings, such as permitting individual solar panels to be applied to the proposed residential uses. This would be installed in compliance with Title 24 Section 110.10, which includes

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43 U.S. EIA, Annual Energy Outlook 2020, Table 11. Petroleum and Other Liquids Supply and Disposition, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=11-AEO2020&cases=ref2020&sourcekey=0>. Accessed April 2021.

44 One oil barrel is equivalent to 42 gallons.

mandatory regulations for solar-ready buildings and would not preclude the use of alternate energy sources. Moreover, consistent with Section 21.45.400 of the LBMC, the proposed Project would be required to meet the LEED® program at the certified level and comply with the City’s green building program. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water, and other resources more efficiently; and reducing the overall impact to the environment. Furthermore, future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary, to demonstrate consistency with State or local plans for energy efficiency. Since the proposed Project is consistent with these plans and policies, its contribution to cumulative impacts related to conflicts with or obstruction of a State or local plan for renewal energy or energy efficiency, would be less than significant.

## **8. MITIGATION MEASURES**

Impacts related to energy resources are less than significant and no mitigation measures are required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

No mitigation measures are required; impacts related to energy resources would remain less than significant.

### 1. INTRODUCTION

This section describes the existing geology and soil conditions on the Project Site, applicable laws and regulations associated with geology and soils and provides an analysis of the potential effects resulting from implementation of the proposed Project. Information contained in this section is summarized from the *Geohazards Report* for the proposed River Park Residential Development, by Converse Consultants, June 17, 2020 (**Appendix IV.F.1: Geohazards Report**), *Paleontological Resources Analysis* prepared by Los Angeles Natural History Museum dated August 7, 2020 (**Appendix IV.F.2: Paleontological Resources Analysis**), and *Paleontological Resources Assessment* prepared by Los Angeles Natural History Museum dated April 14, 2021 (**Appendix IV.F.3: Paleontological Resources Assessment**).

### 2. ENVIRONMENTAL SETTING

#### *Existing Conditions*

##### **Regional Geologic Setting**

The City of Long Beach (City) is located on the coastal margin of the Los Angeles Basin, which is underlain by over 15,000 feet of stratified sedimentary rocks of marine origin. The coastal terrace on which the City lies is flanked by two flood plains on the east and west. Faults associated with the Newport-Inglewood Fault Zone cut diagonally across these features. In general, the City is of low relief,<sup>1</sup> with a lack of significant slopes. The greatest relief is in the Signal Hill, Reservoir Hill, and Bixby Knolls areas, reflecting ancient activity along the Newport-Inglewood Fault Zone. Other areas of moderate relief include sea bluffs along the coast and lesser bluffs along the flood plains.

With the exception of isolated hill areas, the ground surface elevation is generally less than 60 feet. The ground water level is typically less than 60 feet below the ground surface and less than 20 feet below the ground surface in many areas.

The low areas now occupied by the Los Angeles and San Gabriel rivers represent channels that were cut deeply into the marine sediments by ancestral rivers during the lower sea level stand of the last Ice Age in late Pleistocene time. Over the last 17,000 years, the rivers have filled these channels to their present levels with relatively unconsolidated sand, silt, and gravel.

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1 "Relief" is typically defined as the difference in height between the high point and the low point on a landscape.

The folding and faulting that has uplifted and deformed the sediments within the City has been mainly concentrated along a nearly continuous row of hills referred to as the Newport-Inglewood Fault Zone, discussed further below.<sup>2</sup>

### Local Geologic Setting

The Project area is located in the Peninsular Ranges geomorphic province of southern California, a region bordered to the north by the Transverse Ranges and to the east by the Colorado Desert, and extending south into Baja California, see *Geohazards Report* included as **Appendix IV.F.1**. Stratigraphically the region sits in the Los Angeles sedimentary basin. This basin formed as a result of transrotation<sup>3</sup> of the Transverse Range block and subsequent accommodation by the formation of a sphenochasm<sup>4</sup> in the geographic location of the modern Los Angeles Basin. Basin fill begins in the Miocene. Sediment fill was predominantly Miocene to Pliocene marine sediments with deposition of such units as prolific petroliferous Monterey and Pico Formations. Today the basin is an emergent alluviated coastal plain. Through the Pleistocene with uplift of the region, a number of coastal terraces have formed as well.

### Project Site

Extensive environmental studies for soil gas, soil and ground water, site monitoring and site remediation activities have been performed on the Project Site. Wastewater treatment activities have occurred on site since the 1920s. Oil field wastewater treatment facility operations treated oil field brines and wastewater that were direct by-products of crude oil drilling and oil production. Environmental monitoring and remediation activities on the Project Site are ongoing to further clean up the Project Site. Environmental remediation activities on the Project Site are currently being monitored and reviewed by the City and the Regional Water Quality Control Board (RWQCB). Existing ground surface elevations range from approximately 25 feet to 40 feet above mean sea level (msl).

### Subsurface Profile

The Project Site is located in the southeast portion of the Los Angeles Basin near the western end of Signal Hill. Previous grading and earthwork has been performed along the edges of the Project Site to create the fill embankments for the Los Angeles River Flood Control Channel to the west of the Site and for support of the San Diego Freeway (Interstate 405) raised freeway level and embankments to the north. The property is reported to be underlain by up to 26 feet of undocumented fill placed during previous site grading and earthwork activities. The depth of undocumented fill varies across the Project Site and within

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2 City of Long Beach. Long Beach General Plan–Seismic Safety Element. Accessed April 2021.

3 The rotation of the earth's crust/plate, often in response to pressure from stronger opposite sides of faults.

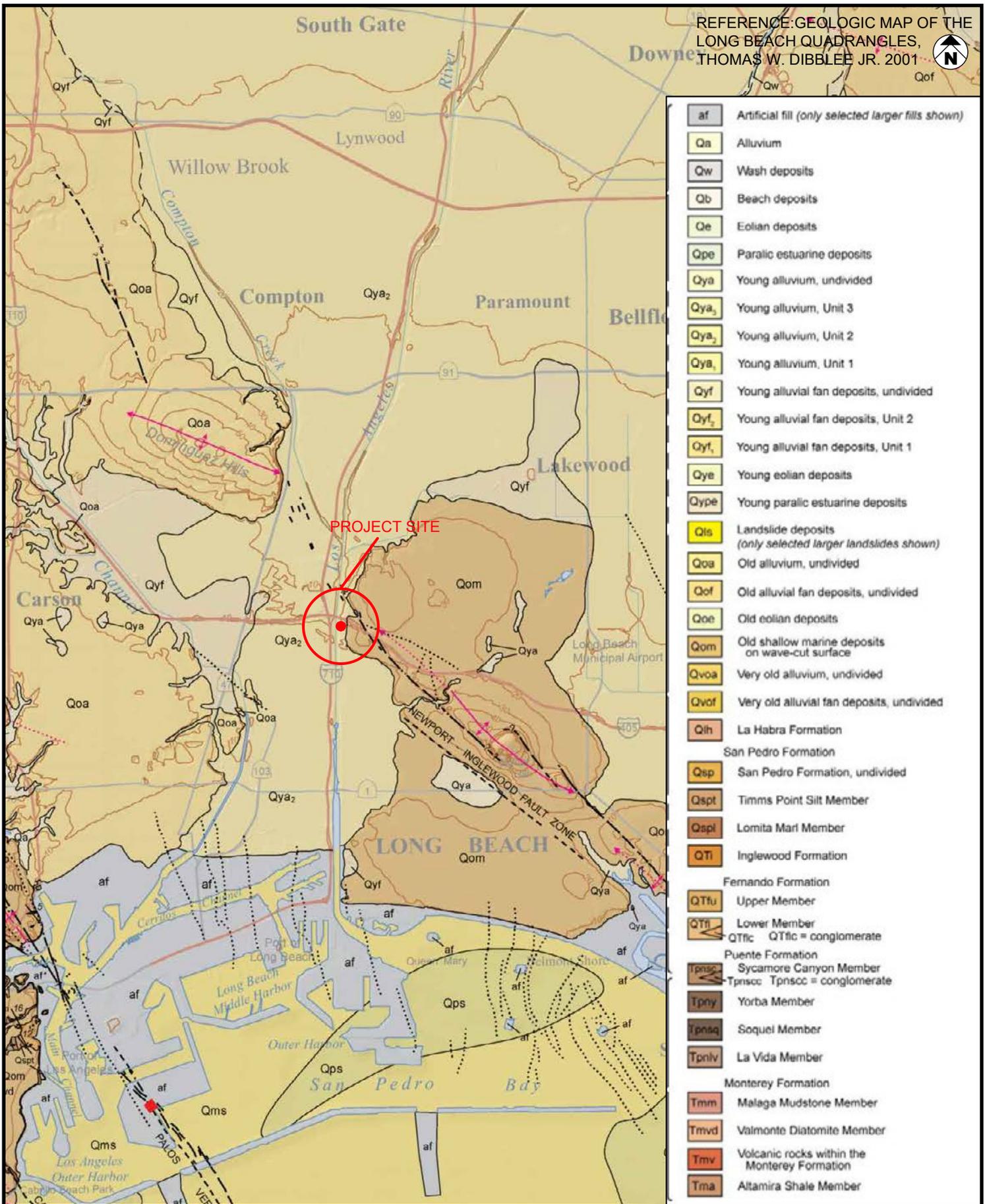
4 The triangular gap of oceanic crust separating two cratonic blocks of continental crust with fault margins converging to a point, and interpreted as having originated by the rotation of one of the blocks with respect to another.

the basins. The fill soils consist of fine-grained silty sand, sandy silts, silts, clayey silts, and silty clays. The fill soils are underlain by non-marine and marine alluvial sediments that have gradually filled the coastal basin over time to form a broad coastal plain. Based on the exploratory soil borings and Cone Penetration Tests (CPTs), the native alluvial site soils consist of fine-grained, interbedded layers of sands, silty sands, sandy silts, silts, clayey silts, and clays to the maximum explored depth of approximately 60 feet below ground surface (bgs).

The Project area is immediately underlain by Holocene and Pleistocene age surficial sediments (Qya2). Holocene-age alluvial deposits, particularly those younger than 5,000 years old, are generally too young to contain fossilized material and are considered to have a low paleontological resource potential in accordance with SVP guidelines. Qya2 is mapped extensively within the Project Site and surrounding area, as shown in **Figure IV.F-1: Geologic Map**. The eastern edge of the Project Site is underlain by Pleistocene, uplifted, shallow marine sediments (Qom). The Qom is poorly sorted, unconsolidated, beach and near shore sediments. Due to the abrasive nature of these environments, fossil preservation is typically poor. Pleistocene age alluvial sediments in the vicinity have preserved Ice Age vertebrate fauna of large land mammals, including mammoth and camel. Due to the intense historical usage of the Project Site for the petroleum industry, in places of the Project area there is fill up to 25 feet deep. Fill is considered to have a low sensitivity for fossil resources.

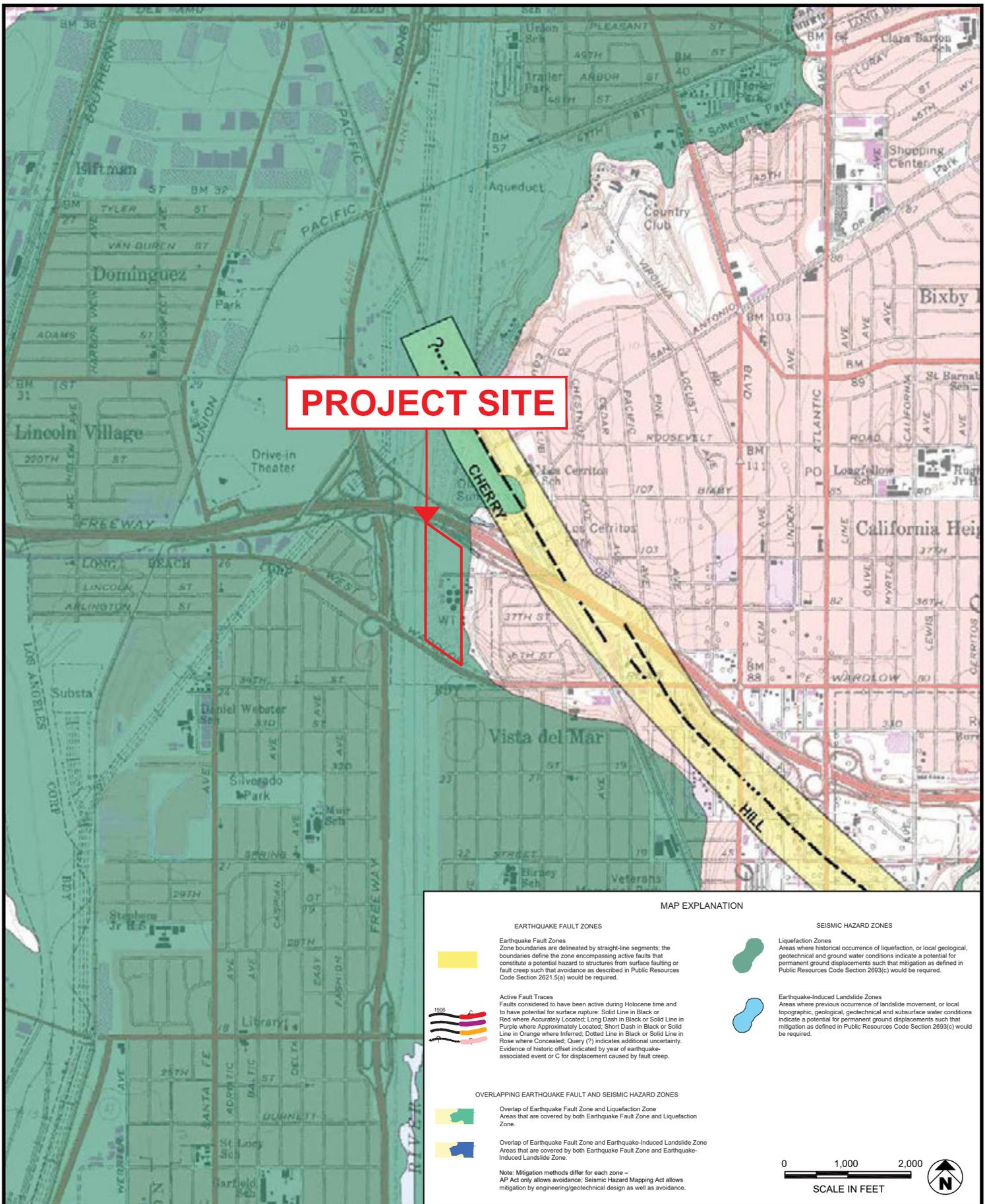
### ***Seismic Setting***

Similar to much of California, the Project Site is located within a seismically active region. **Figure IV.F-2: Seismic Hazards Zone Map** shows the regional fault hazards. The seismic and fault hazards relevant to the Project Site are described below. The most significant active faults within the City lie along the Newport-Inglewood Fault Zone. The Palos Verdes Fault is another significant fault near the City. It traverses the northern edge of the Palos Verdes Hills and trends offshore through Los Angeles Harbor then continues just offshore of the City. This fault is also believed to be active and could produce severe seismic shaking within the City. These faults are discussed in further detail below.



SOURCE: Converse Consultants, 2020

FIGURE IV.F-1



SOURCE: Converse Consultants, 2020

FIGURE IV.F-2

## Active Faults

### ***Newport Inglewood Fault***

The Newport-Inglewood fault zone is located approximately 0.18 miles to 0.37 miles east of the Project Site. According to the Seismic Safety Element of the City General Plan, the Newport Inglewood Fault Zone is a right-lateral wrench fault system consisting of a series of echelon fault segments and folds. This zone is visible on the surface as a series of northwest trending elongated hills extending from Newport Beach to Beverly Hills, including Signal and Dominquez Hills. Signal Hill is located approximately 0.50 miles southeast of the Project Site. Topographic highs along the zone are surface expressions of individual faulted anticlinal structures, and these faults and folds act as ground water barriers and, at greater depths, form petroleum traps. Active or potentially active faults of the Newport-Inglewood Fault Zone within the boundaries of Long Beach include the Cherry Hill Fault, the Northeast Flank Fault, and the Reservoir Hill Fault. Subsurface movement on the Newport-Inglewood Zone produced the 1933 Long Beach Earthquake<sup>5</sup> that caused severe damage in the City and the 1920 Inglewood Earthquake<sup>6</sup> that resulted in notable damage in the City of Inglewood. Ground breakage has not been observed along the faults of the Newport-Inglewood Zone in historic times within the City. However, the existence of well-defined fault scarps is suggestive of ground breakage in recent geologic time of approximately the last 10,000 years. An estimated maximum earthquake of magnitude 7 has been assigned to the zone on the basis of its estimated rupture length and its slip rate.<sup>7</sup>

### ***Whittier Fault***

The Whittier Fault is located approximately 16 miles northeast of the Project Site. The revised official map for the La Habra Quadrangle, effective November 1, 1991, shows the Whittier Fault northeast of the Project Site in the Puente Hills to be zoned as an active fault with potential for surface fault rupture. The Whittier Fault is part of the Elsinore Fault system, one of the major right-lateral strike slip faults on the Peninsular Range of mountains and hills in Southern California. The Elsinore faults splits northwestward into the Chino fault and westward into the Whittier fault near the City of Corona. The Whittier fault turns northwest at the San Gabriel River and Whittier Narrows and becomes the East Montebello fault. The Whittier Fault a magnitude 6.8 earthquake.

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5 Magnitude 6.3.

6 Estimated magnitude 4.9.

7 City of Long Beach. Long Beach General Plan- Seismic Safety Element, [https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element\\_reduced](https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element_reduced), accessed April 2021.

### ***Puente Hills Blind Thrust Fault***

Blind thrust faults are low angle reverse faults which generally are not visible at ground surface level and are characterized by traits such as folding and uplifting of ridged hillsides. Examples of blind thrust faults include the Elysian, Repetto, Montebello, and Puente Hills faults. Subsurface movement on Puente Hills Blind Thrust produced the 1987 Whittier Earthquake<sup>8</sup> and the 1994 Northridge Earthquake.<sup>9</sup>

The Puente Hills Blind Thrust is approximately 26 miles long and 12 miles wide and ranges between 1.8 miles and 8 miles below the ground surface. The thrust fault travels from the Montebello Hills and Puente Hills beneath the San Gabriel basin.

### ***Geologic Hazards***

Faults generally produce damage through ground shaking and surface rupture. Seismically induced ground shaking covers a wide area and is greatly influenced by the distance of a site to the seismic source, soil conditions and depth to groundwater. Surface rupture is limited to very near the fault line. Other hazards associated with seismically induced ground shaking include landslides, liquefaction, lateral spreading, seismically induced slope instability, earthquake-induced flooding, and tsunamis and seiches.

### **Fault Surface Rupture**

Ground rupture or displacement occurs as a fault breaks the ground surface during a seismic event, this hazard is usually anticipated to occur along pre-existing faults during an earthquake.

The Project Site is not located within Stat Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture (see **Appendix IV.F.1**). The Alquist Priolo Earthquake Fault Zoning Act requires the California Geologic Survey to zone “active faults” within the State. An “active fault” refers to faults that has exhibited surface displacement within Holocene time or within the last 11,700 years. Surface displacement within this timeframe displays the active nature of the fault, hence constituting a potential hazard to structures that may be located across it. Essential service structures are required to be set-back at least 50 feet from an active fault. The active fault set-back distance is measured perpendicular from the dip of the fault plane. Based on review of existing geologic information, no known active faults project through or toward the Site. The nearest mapped active fault trace is the Newport-Inglewood fault zone located approximately 0.18 mile to 0.37 mile east of the Project Site. The potential for surface rupture resulting from the movement of nearby major faults, or currently unknown faults, is considered low.

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8 Magnitude 5.9.

9 Magnitude 6.7.

## Landslides

Topography on the Project Site and surrounding areas is relatively flat. Fill slope embankments for the Los Angeles River channel embankment are located along the west side of the Project Site and along the north side of the property along the San Diego Freeway (Interstate 405). These engineered fill slope embankments range from 20 to 25 feet in vertical height. No earthquake-induced landslide areas are shown on the Earthquake Zones of Required Investigation – Long Beach Quadrangle by the California Geologic Survey for the Project Site. In the absence of significant ground slopes, the potential for seismically induced landslides to affect the Project Site is very low (see **Appendix IV.F.1**).

## Liquefaction

A portion of the Project Site is in a liquefaction potential moderate area as identified in the California Geologic Survey (CGS) and the City's General Plan Seismic Safety Element.<sup>10,11</sup> The Project Site is underlain by alluvial sediments that are identified within a mapped potential liquefaction zone (see **Appendix IV.F.1**). Liquefaction is the sudden decrease in the strength of cohesionless soils due to dynamic or cyclic shaking. Saturated soils behave temporarily as a viscous fluid (liquefaction) and, consequently, lose their capacity to support the structures founded them. The potential for liquefaction decreases with increasing clay and gravel content but increases as the ground acceleration and duration of shaking increase. Liquefaction potential has been found to be the greatest where the groundwater level and loose sands occur within 50 feet of the ground surface. Soil liquefaction generally occurs in submerged sandy soils and non-plastic silts during or after strong ground shaking.

## Lateral Spreading

Seismically induced lateral spreading involves primarily lateral movement of the earth due to ground shaking. It differs from the slope failure in that complete ground failure involving large movement does not occur due to the relatively smaller gradient of the ground surface. Lateral spreading is characterized by near-vertical cracks with predominantly horizontal movement of the soil involved. The topography at the Project Site is relatively flat. Fill slope embankments for the Los Angeles River channel are located along the west side of the Project Site and for the San Diego Freeway along the north side of the Site. The fill slopes were engineered to provide support for their respective structures. Under these circumstances, the potential for lateral spreading on these fill slope embankments are considered low.

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10 California Geologic Survey, Earthquake Zones of Required Investigation, <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed April 2021.

11 City of Long Beach. Long Beach General Plan- Seismic Safety Element, [https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element\\_reduced](https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element_reduced), accessed April 2021.

### **Seismically Induced Slope Instability**

Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. The Project Site is not shown with any earthquake-induced landslide areas due to the relatively flat ground conditions of the Site topography (see **Appendix IV.F.1**). In the absence of significant ground slopes, the potential for seismically induced landslides to affect the Project Site is considered to be very low.

### **Flooding**

The Flood Insurance Rate Map (FIRM) indicates that the Project Site is in an area designated as Zone X, an area of minimal flood hazard (see **Appendix IV.F.1**). The area along the west side of the Project Site at the base of the Los Angeles River channel embankment is mapped as an area with reduced flood risk due to levee. The Los Angeles River flood channel located west of the Project Site was built with a low flow central channel and lined with concrete on the bottom and embankment sidewalls to control erosion. Due to the absence of groundwater at shallow depths, proximity of the Los Angeles River channel that serves as a regional flood control structure, and freeway embankments located along the north side of the Project Site, the potential for earthquake induced flooding at the Project Site is considered low.

### **Tsunami and Seiches**

Tsunamis are seismic sea waves generated by major ground movement. Based on the location of the Project Site from the Pacific Ocean, approximately 3.1 miles, and review of the Tsunami Inundation Map for Emergency Planning – Long Beach Quadrangle, tsunamis do not pose a hazard. The mapped tsunami inundation run up area extends northward up the Los Angeles River flood channel to approximately 1.4 miles south of the Project Site to an area south Willow Street. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. Based on Project Site location away from lakes and reservoirs, seiches do not pose a hazard (see **Appendix IV.F.1**).

### **Paleontological Resources**

The Natural History Museum of Los Angeles County (NHMLAC) records five fossil localities from the vicinity of the proposed Project, two invertebrate locations and three vertebrate locations. All of these come from similar geologic units as those that underlay the Project area, but none are found from within the Project boundary (see **Appendix IV.F.3**).

### 3. REGULATORY SETTING

#### Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the U.S. through the establishment and maintenance of an effective earthquake hazards reduction program. To accomplish this goal, the act established the National Earthquake Hazards Reduction Program, which was further refined by the National Earthquake Hazards Reduction Program Act.

#### Uniform Building Code

The Uniform Building Code is published by the International Conference of Building Officials and forms the basis for CBC, as well as approximately half of the State building codes in the U.S. The California Legislature has adopted the Uniform Building Code to address the specific building conditions and structural requirements for California, as well as provide guidance on foundation design and structural engineering for different soil types.

#### Alquist-Priolo Earthquake Fault Zone Act

The Alquist-Priolo Earthquake Fault Zone Act (California PRC Sections 2621–2630) was passed into law following the destructive February 9, 1971, San Fernando earthquake, which was associated with extensive surface fault ruptures that damaged numerous structures. The act provides a mechanism for reducing losses from surface fault rupture on a Statewide basis. The intent of the act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep.

#### California Building Standards Code (CBC)

California provides minimum standards for building design through the CBC (Title 24). The 2019 California codes became effective January 1, 2020. With the shift from seismic zones to seismic design, the CBC philosophy has shifted from “life safety design” to “collapse prevention,” meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site.

#### Public Resources Code (PRC)

The PRC includes regulations for paleontological resources as described below:

- PRC Section 5097.5: Provides for the protection of paleontological resources and prohibits the removal, destruction, injury, or defacement of paleontological features on any lands under the jurisdiction of State or local authorities.

- PRC Section 30244: Requires reasonable mitigation for impacts on paleontological resources that occur as a result of development.

### **Seismic Hazard Mapping Act**

The California Department of Conservation provides guidance to the Seismic Hazards Mapping Act, which aims to reduce the threat of seismic hazard to public health and safety by identifying and mitigating seismic hazards. State, county, and city agencies are directed to utilize such maps in land use and permitting processes. The act also requires geotechnical investigations particular to the Site be conducted before permitting occurs on sites within seismic hazard zones.

### **State Water Resources Control Board Construction Storm Water Program**

Created in 1972 by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program is authorized to State governments by the U.S. Environmental Protection Agency (USEPA) to perform permitting, administrative, and enforcement aspects of the program. Construction activities that disturb 1 acre or more of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ). Construction activities subject to compliance include clearing, grading, and excavating. Applicants of regulated construction activities are required to file Notice of Intent and Permit registration Documents with the State Water Resources Control Board. Applicants must prepare a Storm Water Pollution Prevention Plan and demonstrate conformance with applicable construction best management practices (BMPs).

### **Society of Vertebrate Paleontology**

Professional paleontologists in California adhere to the guidelines set forth by the Society of Vertebrate Paleontology (SVP) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying a Project area can be assigned to one of four categories defined by SVP. These categories include high, low, undetermined, and no paleontological resource potential (see **Table IV.F-1: Paleontological Sensitivity Categories** below):

**Table IV.F-1  
Paleontological Sensitivity Categories**

<b>Resource Potential</b>	<b>Criteria</b>
High Potential (sensitivity)	Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as significant.
Low Potential (sensitivity)	Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic, phylogenetic species and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. However, as excavation for construction gets underway it is possible that significant and unanticipated paleontological resources might be encountered and require a change of classification from Low to High Potential and, thus, require monitoring and mitigation if the resources are found to be significant.
Undetermined Potential (sensitivity)	Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.
No Potential	Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

## City of Long Beach

The Long Beach Development Services (LBDS) Department has a list of Best Management Practices that pertain to construction activities, primarily covering ways to reduce pollution from construction activity, compliance with stormwater regulations, prevention of soil erosion, general site maintenance, proper disposal of cleared vegetation, and demolition waste management.<sup>12</sup>

<sup>12</sup> City of Long Beach, Best Management Practices, Development Services Department, <http://www.longbeach.gov/lbds/building/inspection/best-management-practices/>, accessed April 2021.

### **Long Beach Municipal Code (LBMC)**

Chapter 18.04 Permits outlines the various permit requirements within the City.

Section 18.04.010 describes the permits required to be obtained from the city prior to construction, including building permits, grading permits, electrical permits, plumbing permits, and mechanical permits.

Chapter 18.05 Submittal Documents outlines the various document requirements before permit issuance including construction documents, written record of computations, statement of special inspections, and a geotechnical report.

Chapter 18.40 Building Code outlines the City Council adopted building codes and describes the reinforcement of the California Building Code within the City and any exceptions to the CBC. Chapter 18.68 Earthquake Hazard Regulations defines a systematic procedure for identifying and assessing earthquake generated hazards associated with certain existing structures within the city and to develop a flexible, yet uniform and practical procedure for correcting or reducing those hazards to tolerable hazard levels. This chapter also identifies the minimum standards for structural seismic resistance established primarily to reduce the risk of life loss or injury.

### **Long Beach General Plan**

The General Plan Seismic Safety Element includes advance planning recommendations for land use including giving priority to low risk type projects such as low-rise buildings and open space in areas of known seismic hazards.<sup>13</sup> Additionally, the Seismic Safety Element also includes immediate action recommendations for structure and design, including discouragement of new unfavorable site/structure combinations and no structures for human occupancy within the Alquist-Priolo Special Studies Zones.

The Conservation Element includes soils management goals including minimizing activities which would have a critical or detrimental effect on geologically unstable areas and soils subject to erosion.<sup>14</sup>

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13 City of Long Beach. Long Beach General Plan–Seismic Safety Element, October 1988 [https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element\\_reduced](https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element_reduced). Accessed April 2021.

14 City of Long Beach. Conservation Element, April 1973, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/1973-conservation-element>. Accessed April 2021.

## 4. ENVIRONMENTAL IMPACTS

### ***Thresholds of Significance***

In order to assist in determining whether a project would have a significant effect on the environment, the City finds a project may be deemed to have a significant impact to geology and soils, if it would:

- Threshold GEO-1:**      **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- a.   **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.**
  - b.   **Strong seismic ground shaking.**
  - c.   **Seismic-related ground failure, including liquefaction and lateral spreading**
- Threshold GEO-2:**      **Be located on a geologic unit or soil that is unstable, or that would become unstable as result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.**
- Threshold GEO-3:**      **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.**

As discussed in the IS (**Appendix I.1**), criteria (7-a.iv.), (7-b), (7-d) and (7-e) would result in no impact or a less than significant impact and therefore are not included in the analysis below.

## 5. METHODOLOGY

To evaluate potential hazards related to geologic and soils conditions, Converse Consultants prepared a Geohazards Report.<sup>15</sup> Relevant maps, literature and materials were reviewed as part of the Geotechnical Report, which is included as **Appendix IV.F.1** of this Draft EIR.

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<sup>15</sup> Geohazards Report for the proposed River Park Residential Development, Converse Consultants, June 17, 2020.

## 6. PROJECT IMPACTS

**Threshold GEO-1:** Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- a. **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

The City is located in a seismically active region (as is the entire Los Angeles Basin). In 1972, the Alquist-Priolo Earthquake Zoning Act was passed in response to the damage sustained in the 1971 San Fernando Earthquake.<sup>16</sup> The Alquist-Priolo Earthquake Fault Zoning Act was adopted to prevent the construction of buildings used for human occupancy on the surface trace of active faults.<sup>17</sup> A list of cities and counties subject to the Alquist-Priolo Earthquake Fault Zones is available on the California Department of Conservation's website. The City is located in an area that is surrounded by active and blind thrust faults, however, none of these faults intersect the Project Site, as shown in **Figure IV.F-1: Geologic Map**. The nearest mapped active fault trace is the Newport Inglewood fault zone located approximately 0.18 mile to 0.37 mile east of the Project Site. Other faults located near the City include the Whittier Fault and the Puente Hills Blind Thrust Fault. The Applicant is required to comply with the California Building Code and LBMC Section 18.40 regarding the construction of earthquake resistant buildings which would mitigate foreseeable effects of strong seismic activities in the region. Based on this information, the proposed Project would have a less than significant impact exposing people or structures to adverse effects involving rupture of a known earthquake fault.

- b. **Strong seismic ground shaking?**

As described above, the City lies within a region with several active faults and several blind thrust faults. These faults are capable of producing ground shaking from an earthquake. However, there are no active faults known to exist within the Project Site. Since the City lies within a region with several active faults and several blind thrust faults, earthquakes capable of producing ground shaking are anticipated. A major earthquake produced along any of the regional fault systems has the potential to produce strong ground

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16 California Department of Conservation, Earthquake Fault Map, <https://earthquake.usgs.gov/education/geologicmaps/apfaults.php>. Accessed April 2021.

17 California Department of Conservation, Earthquake Fault Map, <https://earthquake.usgs.gov/education/geologicmaps/apfaults.php>. Accessed April 2021.

shaking in the City. The Project Site would likely experience strong seismic ground shaking during its design life, given the proximity to major faults in the Southern California Region.

The proposed Project would increase the amount of development on site, thereby increasing the number of residents residing in a seismically active region. Since the State is generally located in a seismically active region, all new developments in the State are required to conform to the current seismic design provisions of the California Building Code. The 2019 California Building Code incorporates the latest seismic design standards for structural loads and materials as well as provisions from the National Earthquake Hazards Reduction Program to reduce potential loss from earthquakes and ensure safety of residents on site. Incorporation of seismic design standards would strengthen the structural integrity of the proposed residential buildings and reduce the seismic ground shaking impacts to residents.

Local seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations are required by LBMC 18.05.010 prior to the issuance of construction permits. All building construction associated with the proposed Project would be subject to the City's existing construction regulations, including the California Building Code as adopted by LBMC and the Long Beach Building Standards Code in order to minimize any potential impacts from strong seismic ground shaking. Building designs aligned with existing regulations, codes, and the incorporation of recommendations from the geotechnical investigations' report during City's plan check would reduce seismic shaking impacts to future residents to less than significant.

**c. Seismic-related ground failure, including liquefaction?**

Liquefaction is a process by which sediments below the water table temporarily lose strength and behave as a viscous liquid rather than a solid. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The southwest corner of the Project Site lies within a liquefaction potential moderate area as found in the CGS and the City's General Plan Seismic Safety Element, however, majority of the Site, including the north, central and east portions of the Project Site are within an area with minimal liquefaction potential.<sup>18,19</sup> As mentioned previously, developments in California are required to conform to the current seismic design

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18 California Geologic Survey, Earthquake Zones of Required Investigation, <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed April 2021.

19 City of Long Beach. Long Beach General Plan- Seismic Safety Element, [https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element\\_reduced](https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element_reduced), accessed May 2021.

provisions of the California Building Code. The 2019 California Building Code incorporates the latest seismic design standards for structural loads and materials as well as provisions from the National Earthquake Hazards Reduction Program to reduce potential loss from earthquakes and ensure safety of residents on site. Local seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations required by the City's plan check review process would minimize seismic-related hazards such as liquefaction. Compliance with existing building codes and required studies during design and construction of the proposed Project would reduce seismic-related hazards such as liquefaction for future residents to a less than significant level.

**Threshold GEO-2:        Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

As discussed above under Threshold GEO-1(c), the Project would be located in an area susceptible to seismic-related ground failure, including liquefaction and lateral spreading. The Project Site is not located in an area designated by the City or State as being prone to landslides. The Project Site is within a land subsidence area caused by oil extraction.<sup>20</sup>

### ***Landslides (On- or Off-Site)***

A landslide is defined as the movement of a mass of rock, debris, or earth down a slope. Landslides are a type of mass wasting, which denotes any down-slope movement of soil and rock under the direct influence of gravity.<sup>21</sup> Topography on the Project Site and surrounding areas is relatively flat. Fill slope embankments for the Los Angeles River channel embankment are located along the west side of the Project Site and along the north side of the property along the San Diego Freeway (Interstate 405). These engineered fill slope embankments range from 20 to 25 feet in height. No earthquake-induced landslide areas are shown on the Earthquake Zones of Required Investigation – Long Beach Quadrangle by the California Geologic Survey for the Project Site. In the absence of significant ground slopes, the potential for seismically induced landslides to affect the Project Site is very low (see **Appendix IV.F.1**) Local seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations required by the City's plan check review process would minimize seismic-related hazards such as on- or off-site landslides prior to issuance of construction permits. Compliance with existing building codes and required studies during design and construction of the Project would

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20 USGS, Areas of Land Subsidence in California, [https://ca.water.usgs.gov/land\\_subsidence/california-subsidence-areas.html](https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html), accessed April 2021.

21 USGS, Natural Hazards, [https://www.usgs.gov/faqs/what-a-landslide-and-what-causes-one?qt-news\\_science\\_products=0#qt-news\\_science\\_products](https://www.usgs.gov/faqs/what-a-landslide-and-what-causes-one?qt-news_science_products=0#qt-news_science_products), accessed May 2021.

reduce seismic-related hazards such as on- or off-site landslides for future residents to a less than significant level.

### ***Lateral Spreading***

Seismically induced lateral spreading involves primarily lateral movement of the earth due to ground shaking. The topography at the Project Site is relatively flat. Fill slope embankments for the Los Angeles River channel are located along the west side of the Project Site and for the San Diego Freeway along the north side of the Site. The fill slopes were engineered to provide support for their respective structures. Under these circumstances, the potential for lateral spreading on these fill slope embankments are considered low. Local seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations required by the City's plan check review process would minimize seismic-related hazards such as lateral spreading prior to issuance of construction permits. Compliance with existing building codes and required studies during design and construction of the Project would reduce seismic-related hazards such as lateral spreading for future residents to a less than significant level.

### ***Subsidence and Liquefaction***

As discussed under threshold GEO-1(c), the majority of the Project Site lies within a potential liquefaction minimal area with the southwest corner of the Project Site within a liquefaction potential moderate area as found in the CGS and the City's General Plan Seismic Safety Element.<sup>22,23</sup> As mentioned previously, developments in California are required to conform to the current seismic design provisions of the California Building Code. The 2019 California Building Code incorporates the latest seismic design standards for structural loads and materials as well as provisions from the National Earthquake Hazards Reduction Program to reduce potential loss from earthquakes and ensure safety of residents on site. Local seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations required by the City's plan check review process would minimize seismic-related hazards such as subsidence and liquefaction prior to issuance of construction permits. Compliance with existing building codes and required studies during design and construction of the Project would reduce seismic-related hazards such as subsidence and liquefaction for future residents to a less than significant level.

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22 California Geologic Survey, Earthquake Zones of Required Investigation, <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed April 2021.

23 City of Long Beach. Long Beach General Plan–Seismic Safety Element, [https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element\\_reduced](https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/seismic-safety-element_reduced), accessed May 2021.

### ***Seismically Induced Slope Instability and Collapse***

Seismically induced landslides or slope collapse are common occurrences during or soon after earthquakes. As mentioned previously, the Project Site is not shown within any earthquake-induced landslide areas due the relatively flat ground conditions of the Site topography (see **Appendix IV.F.1**). In the absence of significant ground slopes, the potential for seismically induced landslides and collapse to affect the Project Site is considered to be very low; and local seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations required by the City's plan check review process, would minimize seismic-related hazards, such as seismically induced slope instability or collapse prior to issuance of construction permits. Compliance with existing building codes and required studies during design and construction of the Project would reduce seismic-related hazards such as seismically induced slope instability and collapse for future residents to a less than significant level.

In conclusion, local seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations required by the City's plan check review process, would minimize seismic-related hazards prior to issuance of construction permits. Compliance with existing building codes and required studies during design and construction of the Project would reduce seismic-related hazards such as on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse for future residents to a less than significant level.

**Threshold GEO-3:        Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Paleontological resources are the fossilized remains of organisms that have lived in a region in the geologic past and whose remains are found in the accompanying geologic strata. This type of fossil record represents the primary source of information on ancient life forms, since the majority of species that have existed on earth from this era are extinct. PRC Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor. Furthermore, California Penal Code Section 622.5 includes penalties for damage or removal of paleontological resources.

Based on a records search conducted by the NHMLA (see **Appendix IV.F.2**), there are no fossil localities that lie directly within the boundaries of the Project Site. However, the records search indicates that within the Project area, there are fossil localities nearby from the same sedimentary deposits that occur in the proposed Project area, either at the surface or at depth.

The nearest fossil locality from these deposits is from LACM IP 424, located near Interstate 405 and Atlantic Boulevard, approximately 1.1 miles southeast of the Project Site. This location produced invertebrates at

unknown depths. The next closest fossil locality, LACM VP 4129, located near 223rd Street and Alameda Street, approximately 1.3 miles west of the Project Site, produced fossil specimens of proboscidea and camelidae, at depths of approximately 24 feet bgs. Further to the west, near Carson Street and Alameda Street, approximately 1.4 miles northwest of the Project Site, LACM VP 3319 produced a specimen of a fossil mammoth at a depth of 30 feet bgs. The furthest fossil locality, LACM VP 3660, located near Clover Street and Pixie Avenue, approximately 2.4 miles northeast of the Project Site, produced a specimen of a fossil mammoth at a depth of 19 feet bgs.

Shallow excavations in the Project area are unlikely to yield any significant paleontological resources because younger Quaternary deposits are void of fossils and near-surface alluvium is usually too young to contain fossils, and therefore possesses low sensitivity. In addition, the Project area has undergone significant surficial disturbance. However, deeper excavations approaching 19 feet below ground surface in undisturbed sediment, which may extend down into older Quaternary (Pleistocene) alluvial deposits are more likely to unearth fossil vertebrate remains. Older Quaternary deposits underlying the Project area are considered to have a high paleontological sensitivity because they have proven to yield significant paleontological resources (i.e., identifiable vertebrate fossils). Generally, ground-disturbing activities exceeding depths beyond Holocene soils and younger Quaternary alluvium would encounter older Quaternary alluvium (see **Appendix IV.F.3**).

Since the proposed Project requires excavations for a housing development, new ground disturbances are anticipated. Sediments in the Project area have a low-to-high paleontological sensitivity, being too young and disturbed at the surface to preserve fossil resources but increasing in age and sensitivity with depth. Ground disturbing activities in previously undisturbed portions of the Project deeper than 19 feet may result in significant impacts to paleontological resources, such as destruction, damage, or loss of scientifically important paleontological resources. Mitigation measures are recommended below to reduce and minimize the project impacts to paleontological resources to a less than significant level.

## **7. CUMULATIVE IMPACTS**

Geotechnical impacts related to future development in the City would involve hazards related to site-specific soil conditions, erosion, and ground-shaking during earthquakes. These impacts would be site-specific and would not be common to (nor shared with, in an additive sense) the impacts on other sites. Cumulative development in the area would increase the overall population for exposure to seismic hazards by increasing the number of people potentially exposed. However, with adherence to applicable State and federal regulations, building codes and sound engineering practices, geologic hazards could be reduced to less-than-significant levels for the future residents at the Project Site. Furthermore, development of each of the related projects and the proposed Project would be subject to existing building codes, uniform site

development and construction review standards that are designed to protect public safety. Based on the existing related projects' list in **Section 3: Environmental Setting**, no related projects are directly adjacent to the Project Site. Therefore, cumulative geotechnical impacts would not be cumulatively considerable.

Impacts to paleontological resources related to future development in the City would have the potential to damage paleontological resources. However, there are no known paleontological resources in existence on the Project Site and implementation of mitigation measures would prevent the destruction of any unforeseen paleontological discoveries. Additionally, all future development projects would be required to conduct paleontological surveys to determine an individual project's potential to impact paleontological resources and reduce such impacts to the extent feasible. Given no known paleontological resources are known to exist on the Project Site, the localized nature of most paleontological finds, and the implementation of mitigation measures which reduce the construction impacts to paleontological resources to less than significant, the proposed Project would not contribute to cumulative impacts in an additive sense. Therefore, cumulative paleontological impacts would not be cumulatively considerable.

## 8. MITIGATION MEASURES

The following mitigation measure is proposed to reduce potential impacts to risk, loss, or injury to people and structures based on seismic-related ground shaking, including liquefaction and lateral spreading to a less than significant level:

### **MM GEO-1:** Worker's Environmental Awareness Program (WEAP)

Prior to the start of the proposed Project activities, all field personnel will receive a worker's environmental awareness training on paleontological resources. The training will provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the paleontological monitor, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Project Paleontologist. The Project Paleontologist will develop the training, which can be delivered concurrent with other training including cultural, biological, safety, etc. A copy of all training material, as well as the qualifications and contact for the Project Paleontologist shall be provided to the City prior to the start of the proposed Project activities.

**MM GEO-2:** Paleontological Mitigation Monitoring

Prior to the commencement of ground-disturbing activities, a professional paleontologist will be retained to prepare and implement a PRMMP for the proposed Project. The PRMMP will describe the monitoring required during excavations that extend into older Quaternary (Pleistocene) age sediments, and the location of areas deemed to have a high paleontological resource potential. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted, based on the geologic conditions at depth, he or she may recommend that monitoring be reduced or cease entirely. A copy of the PRMMP shall be provided to the City prior to the start of the proposed Project activities.

**MM GEO-3:** Fossil Discoveries

In the event that a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

- Salvage of Fossils

If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) should recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared for the project. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.

- Fossil Preparation and Curation

The PRMMP will identify the museum that has agreed to accept fossils that may be discovered during project-related excavations. Upon completion of fieldwork, all significant fossils collected will be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from

fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens will be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation will be assessed by the repository and will be the responsibility of the client.

**MM GEO-4:** Final Paleontological Mitigation Report

Upon completion of ground disturbing activity (and curation of fossils if necessary) the Project Paleontologist should prepare, and submit to the City, a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report should include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

## 9. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of **MM GEO-1** through **MM-GEO 4** would ensure that paleontological resources would be identified before they are damaged or destroyed and are properly evaluated and treated to reduce potentially significant impacts to less than significant. **MM GEO-1** would implement a WEAP developed by the designated Project Paleontologist prior to Project construction. The WEAP would provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the paleontological monitor, outline steps to follow if a fossil discovery is made and provide contact information for the Project Paleontologist. **MM GEO-2** would require a retained professional paleontologist to prepare a PRMMP to outline monitoring required during excavation that extend into Pleistocene sediments and the location of areas on the Project Site that have high paleontological resource potential. **MM GEO-3** outlines the processes related to proper fossil salvaging, preparation, and curation in the event a scientifically significant paleontological resource is discovered. Finally, **MM GEO-4** would require a final Paleontological Mitigation Report which would be prepared upon completion of ground-disturbing activity during Project construction. This report would outline the results of the PRMMP, including discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils and where fossils were curated. Following the process outlined by the mitigation measures would ensure the protection of any unforeseen fossil resources discovered during construction and the proper handling and documentation of such resources. Therefore, implementation of **MM GEO-1** through **MM GEO-4** would ensure potential impacts related to paleontological resources would be less than significant.

## IV.G GREENHOUSE GAS EMISSIONS

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### 1. INTRODUCTION

This section of the Draft EIR provides a discussion of global climate change, existing regulations pertaining to climate change, an inventory of the greenhouse gas (GHG) emissions that would result from the Project, and an analysis of the potential impact of those GHGs. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in **Appendix IV.G.1: GHG Calculation Worksheets** of this Draft EIR.

### 2. ENVIRONMENTAL SETTING

#### Greenhouse Gases and Climate Change

##### *Global Context*

GHGs are global pollutants that have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for a long enough time to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule depends on multiple variables and cannot be pinpointed, more CO<sub>2</sub> is currently emitted into the atmosphere than is avoided or sequestered. CO<sub>2</sub> sinks, or reservoirs, include vegetation and the ocean, which absorb CO<sub>2</sub> through photosynthesis and dissolution, respectively. These are two of the most common processes of CO<sub>2</sub> sequestration. Of the total annual human-caused CO<sub>2</sub> emissions, approximately 54 percent is sequestered within a year through ocean uptake, northern hemisphere forest regrowth, and other terrestrial sinks; the remaining 46 percent of human-caused CO<sub>2</sub> emissions are stored in the atmosphere.

Similarly, the effects of GHGs are borne globally (sea-level rise, hurricanes, droughts, etc.), as opposed to the localized air quality effects of criteria air pollutants and toxic air contaminants (TACs). The quantity of GHGs that it takes to ultimately result in climate change is not precisely known, but that quantity is enormous. No single project would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or microclimates. However, it is the combined GHG contributions per project that create an impact.

##### *Greenhouse Effect*

GHGs play a critical role in determining the Earth's surface temperature because these gases absorb solar radiation. Solar radiation enters the Earth's atmosphere from space. A portion of the radiation is absorbed by the Earth's surface, and a smaller portion of this radiation is reflected back into space. The radiation absorbed by the Earth is reradiated as lower-frequency infrared radiation, which is then selectively absorbed by GHGs in the Earth's atmosphere. As a result, the greater the amount of GHGs in the atmosphere, the greater the amount of infrared radiation trapped, resulting in a warming of the atmosphere. This phenomenon is commonly referred to as the "greenhouse effect." Scientists have

speculated that increased GHG emissions from human activity (anthropogenic) could lead to a less habitable climate. Anthropogenic GHG emissions leading to atmospheric levels in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the Earth's atmosphere and oceans, with corresponding effects on global air and water circulation patterns and climate. CO<sub>2</sub> emissions associated with fossil fuel combustion are the primary contributors to human-induced emissions.

### ***Climate Change Effects for California***

Climate change could affect environmental conditions in California in a variety of ways. One effect of climate change is rising sea levels. Sea levels along the California coast rose approximately 7 inches during the last century, and they are predicted to rise an additional 7 to 22 inches by 2100, depending on the future levels of GHG emissions. The effects of a rise in sea level could include increased coastal flooding, saltwater intrusion (especially a concern in the low-lying Sacramento–San Joaquin Delta, where pumps delivering potable water to Southern California could be threatened), and disruption of wetlands.

As the State's climate changes over time, the range of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the State if suitable conditions are no longer available. Additional concerns associated with climate change include a reduction in the snowpack, leading to less overall water storage in the mountains (the largest "reservoir" in the State), and increased risk of wildfires caused by changes in rainfall patterns and plant communities. Changes in the climate can also impact California's weather patterns and rainfall, causing droughts in certain areas and flooding in others.

### ***Sources of Greenhouse Gas Emissions***

GHGs are the result of both natural and anthropogenic activities. With respect to anthropogenic activities, motor vehicle travel, air travel, consumption of fossil fuels for power generation, industrial processes, heating and cooling, landfills, agriculture, and wildfire are the primary sources of GHG emissions. Additionally, land use decisions and future development projects pursuant to implementation of a general plan can affect the generation of GHG emissions from multiple sectors, resulting in direct or indirect GHG emissions. For example, electricity consumed in the lighting and heating of buildings is an indirect source of GHG emissions because it requires electricity from power plants, which emits GHG directly into the atmosphere. Conversely, tailpipe emissions from the use of vehicles generates direct GHG emissions.

GHGs are a group of emissions that include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, and nitrogen trifluoride (NF<sub>3</sub>). Carbon dioxide is the most abundant GHG. As stated above, other GHGs are less abundant, but have higher global warming potential than CO<sub>2</sub>. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO<sub>2</sub>; denoted as CO<sub>2</sub>e. A general description of GHGs discussed is provided in **Table IV.G-1: Description of Identified Greenhouse Gases.**

**Table IV.G-1  
Description of Identified Greenhouse Gases**

<b>GHG</b>	<b>General Description</b>
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	An odorless, colorless GHG that has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO <sub>2</sub> are burning coal, oil, natural gas, and wood.
<b>Methane (CH<sub>4</sub>)</b>	A flammable gas and is the main component of natural gas. When one molecule of CH <sub>4</sub> is burned in the presence of oxygen, one molecule of CO <sub>2</sub> and two molecules of water are released. A natural source of CH <sub>4</sub> is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH <sub>4</sub> , which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.
<b>Nitrous Oxide (N<sub>2</sub>O)</b>	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N <sub>2</sub> O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
<b>Hydrofluorocarbons (HFCs)</b>	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH <sub>4</sub> or ethane (C <sub>2</sub> H <sub>6</sub> ) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
<b>Perfluorinated Chemicals (PFCs)</b>	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conduction manufacturing.
<b>Sulfur Hexafluoride (SF<sub>6</sub>)</b>	An inorganic, odorless, colorless, nontoxic, and nonflammable gas. SF <sub>6</sub> is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
<b>Nitrogen Trifluoride (NF<sub>3</sub>)</b>	An inorganic, nontoxic, odorless, nonflammable gas. NF <sub>3</sub> is used in the manufacture of semiconductors, as an oxidizer of high energy fuels, for the preparation of tetrafluoro hydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

<sup>a</sup> GHGs identified in this table are ones identified in the Kyoto protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.

## Greenhouse Gas Emissions Inventory and Trends

### Existing Statewide GHG Emissions

California is the second largest contributor of GHGs in the United States and the 16th largest in the world.<sup>1</sup> In 2018, California produced 425.4 million metric tons of carbon dioxide equivalents (MMTCO<sub>2</sub>e), including imported electricity, and excluding combustion of international fuels and carbon sinks or storage. The major source of GHGs in California is transportation, contributing to 40 percent of the State's total GHG emissions. The Statewide inventory of GHGs by sector is shown in **Table IV.G-2: California GHG Inventory 2010-2018**.

**Table IV.G-2  
California GHG Inventory 2010–2018**

Main Sector	Emissions (MMTCO <sub>2</sub> e)								
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Transportation <sup>a</sup>	165.1	161.8	161.4	161.2	162.6	166.2	169.8	171.0	169.5
Electric Power	90.3	89.2	98.2	91.4	88.9	84.8	68.6	62.1	63.1
Industrial <sup>b</sup>	91.0	89.3	88.9	91.6	92.4	90.1	88.9	88.7	89.2
Commercial and Residential	45.9	46.0	43.5	44.2	38.2	38.8	40.6	41.3	41.4
Agriculture	33.7	34.4	35.5	33.8	34.8	33.4	33.2	32.3	32.6
High GWP <sup>c,d</sup>	13.5	14.5	15.5	16.8	17.7	18.6	19.3	20.0	20.5
Recycled and waste	8.7	8.7	8.7	8.7	8.8	8.8	8.9	9.0	9.1
<b>Total Emissions</b>	<b>448.2</b>	<b>443.9</b>	<b>451.7</b>	<b>447.7</b>	<b>443.4</b>	<b>440.7</b>	<b>429.3</b>	<b>424.4</b>	<b>425.4</b>

Source: CARB, GHG Current California Emission Inventory Data, <https://ww2.arb.ca.gov/ghg-inventory-data>. Accessed April 2021.

<sup>a</sup> Includes equipment used in construction, mining, oil drilling, industrial and airport ground operations.

<sup>b</sup> Reflects emissions from combustion of natural gas, diesel, and lease fuel plus fugitive emissions.

<sup>c</sup> These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.

<sup>d</sup> This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors.

Note: MMTCO<sub>2</sub>e - million metric tons of carbon dioxide equivalent emissions

### 3. REGULATORY SETTING

#### Federal

#### *Federal Clean Air Act*

The US Supreme Court ruled in *Massachusetts v. Environmental Protection Agency*<sup>2</sup> that carbon dioxide (CO<sub>2</sub>) and other GHGs are pollutants under the federal Clean Air Act (CAA), which the US Environmental

1 California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, Staff Final Report, CEC-600-2006-013-SF (December 2006).

2 *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007).

Protection Agency (USEPA) must regulate if it determines they pose an endangerment to public health or welfare.<sup>3</sup> The Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the Court found that the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a “reasonable explanation” for not determining that GHGs contribute to climate change.

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171.<sup>4</sup> The USEPA stated that high atmospheric levels of GHGs “are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes.” The USEPA further found that “atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act.” The final rule was effective on January 14, 2010.<sup>5</sup> While these findings alone did not impose any requirements on industry or other entities, this action was a prerequisite to regulatory actions by the USEPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

In response, the USEPA promulgated a regulation to require reporting of all GHG emissions from all sectors of the economy. The final rule applies to fossil fuel suppliers and industrial gas suppliers, direct greenhouse gas emitters and manufacturers of heavy-duty and off-road vehicles and engines. The rule does not require control of greenhouse gases; rather, it requires only that sources above certain threshold levels monitor and report emissions.<sup>6</sup>

### ***Corporate Average Fuel Economy (CAFE) Standards***

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the George W. Bush administration issued Executive Order 13432 in 2007, directing the USEPA, the US Department of Transportation (USDOT), and the US Department of Energy (USDOE) to establish regulations that reduce

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3 Perry W. Payne and Sara Rosenbaum, *Massachusetts et al. v Environmental Protection Agency: Implications for Public Health Policy and Practice*, Public Health Reports 122 No. 6 (2007): 817–819, <https://doi.org/10.1177/003335490712200614>. Accessed April 2021.

4 Federal Register, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act* (December 15, 2009), <https://www.federalregister.gov/documents/2009/12/15/E9-29537/endangerment-and-cause-or-contribute-findings-for-greenhouse-gases-under-section-202a-of-the-clean>. Accessed April 2021.

5 United States Environmental Protection Agency (USEPA), *Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act*, <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean/>. Accessed April 2021.

6 Federal Register, *Mandatory Reporting of Greenhouse Gases* (October 30, 2009), <https://www.gpo.gov/fdsys/pkg/FR-2009-10-30/pdf/E9-23315.pdf>. Accessed April 2021.

GHG emissions from motor vehicles, nonroad vehicles, and nonroad engines by 2008.<sup>7</sup> In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.<sup>8</sup>

In 2010, President Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles.<sup>9</sup> The proposed standards projected to achieve 163 grams/mile of CO<sub>2</sub> in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022 – 2025 in a future rulemaking. On April 2, 2018, the USEPA signed the Mid-term Evaluation Final Determination, which finds that the model year 2022–2025 greenhouse gas standards are not appropriate and should be revised.<sup>10</sup> The Final Determination serves to initiate a notice to further consider appropriate standards for model year 2022–2025 light duty vehicles. On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California’s waiver under the Clean Air Act to establish more stringent standards.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2016, the USEPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. If implemented, the Phase 2 standards would be expected to lower CO<sub>2</sub> emissions by approximately 1.1 billion metric tons (MT), save vehicle owners fuels costs of about \$170 billion.<sup>11</sup> But as discussed above, the USEPA and NHTSA have proposed to roll back

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7 US Government Publishing Office, Administration of George W. Bush, Executive Order 13432—Cooperation Among Agencies in Protecting the Environment With Respect to Greenhouse Gas Emissions From Motor Vehicles, Nonroad Vehicles, and Nonroad Engines, 631 (May 14, 2007), <https://www.gpo.gov/fdsys/pkg/WCPD-2007-05-21/pdf/WCPD-2007-05-21-Pg631.pdf>. Accessed April 2021.

8 USEPA, Regulations for Greenhouse Gas Emissions from Commercial Trucks & Buses (December 27, 2017), <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks>. Accessed April 2021.

9 USEPA, Presidential Announcements and Letters of Support related to Greenhouse Gas Emissions (August 28, 2017), <https://www.epa.gov/regulations-emissions-vehicles-and-engines/presidential-announcements-and-letters-support-related>. Accessed April 2021.

10 Federal Register, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022 – 2025 Light-Duty Vehicles, April 13, 2018, <https://www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty>. Accessed April 2021.

11 USEPA, EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond, August 2016.

GHG and fuel economy for cars and light-duty trucks, which suggest a similar rollback of Phase 2 standards for medium and heavy-duty vehicles may be pursued.

### ***Energy Independence and Security Act***

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:<sup>12</sup>

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of renewable fuel in 2022, with at least 16 billion gallons from cellulosic biofuels and a cap of 15 billion gallons for corn-starch ethanol;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks; and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks, and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”<sup>13</sup>

## **State**

### ***Executive Orders***

#### **Executive Order S-3-05**

Executive Order S-3-05, signed by Governor Arnold Schwarzenegger and issued in June 2005, proclaimed that California is vulnerable to the impacts of climate change.<sup>14</sup> It declared that increased temperatures could reduce the Sierra snowpack, further exacerbate California’s air quality problems, and potentially

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12 USEPA, Summary of the Energy Independence and Security Act, <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>. Accessed April 2021.

13 A green job, as defined by the United States Department of Labor, is a job in business that produce goods or provide services that benefit the environment or conserve natural resources.

14 National Resources Conservation Service, Emerging Issues Committee Members, [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs143\\_008701.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_008701.pdf). Accessed April 2021.

cause a rise in sea levels. To combat those concerns, the Executive Order established the following total GHG emission targets:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

However, in adopting the California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32 (Pavley), discussed below, the Legislature did not adopt the 2050 horizon-year goal from Executive Order No. S-3-05 and, in the 2006 legislative session, rejected legislation to enact the Executive Order's 2050 goal.

### **Executive Order S-01-07**

Executive Order S-1-07, the Low Carbon Fuel Standard (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020.<sup>15</sup> Regulatory proceedings and implementation of the Low Carbon Fuel Standard have been directed to the California Air Resources Board (CARB). CARB has identified the Low Carbon Fuel Standard as a discrete early action item in the adopted Climate Change Scoping Plan (discussed below). CARB expects the Low Carbon Fuel Standard to achieve the minimum 10 percent reduction goal; however, many of the early action items outlined in the Climate Change Scoping Plan work in tandem with one another. Other specific emission reduction measures included are the Million Solar Roofs Program<sup>16</sup> and Assembly Bill (AB) 1493 (Pavley I), Vehicle Emissions: Greenhouse Gases, which establishes motor vehicle GHG emissions standards.<sup>17</sup> To avoid the potential for double-counting emission reductions associated with AB 1493, the Climate Change Scoping Plan has modified the aggregate reduction expected from the Low Carbon Fuel Standard to 9.1 percent. In accordance with the Climate Change Scoping Plan, this analysis incorporates the modified reduction potential for the Low Carbon Fuel Standard. CARB released a draft version of the Low Carbon Fuel Standard in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the Low Carbon Fuel Standard became effective on the same day.

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15 Office of the Governor, Executive Order S-01-07 (January 18, 2007), <https://www.arb.ca.gov/fuels/lcfs/eos0107.pdf>. Accessed April 2021.

16 US Department of Energy, Laying the Foundation for Solar America: The Million Solar Roofs Initiative, <https://www.nrel.gov/docs/fy07osti/40483.pdf>. Accessed April 2021.

17 The standards enacted in Pavley I are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 and going through 2016. Pavley I could potentially result in 27.7 million metric tons CO<sub>2</sub>e reduction in 2020. Pavley II will cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tons CO<sub>2</sub>e.

### **Executive Order B-30-15**

Executive Order B-30-15, signed by Governor Edmund Gerald “Jerry” Brown and issued in April 29, 2015, established a new Statewide policy goal to reduce GHG emissions to 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030, and by 80 percent below 1990 levels by 2050 (consistent with Executive Order S-3-05), aligns with scientifically established levels needed to limit global warming to less than 2 degrees Celsius.<sup>18</sup>

### **Assembly Bill 32 and Related Legislation**

AB 32, the Global Warming Solutions Act of 2006, requires a sharp reduction of GHG emissions to 1990 levels by 2020. To achieve these goals, which are consistent with the California Climate Action Team, which works to coordinate statewide efforts to implement global warming emission reduction programs and the state's Climate Adaptation Strategy after the passing of AB 32, AB 32 mandates that CARB establish a quantified emissions cap and institute a schedule to meet the cap; implement regulations to reduce Statewide GHG emissions from stationary sources consistent with the California Climate Action Team strategies; and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. To reach the reduction targets, AB 32 requires CARB to adopt—in an open, public process—rules and regulations that achieve the maximum technologically feasible and cost-effective GHG reductions.

### **Climate Change Scoping Plan**

CARB approved a Climate Change Scoping Plan (Scoping Plan) on December 11, 2008, as required by AB 32. The Scoping Plan proposed a “comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health.”<sup>19</sup> The Scoping Plan had a range of GHG reduction actions, including direct regulations; alternative compliance mechanisms; monetary and nonmonetary incentives; voluntary actions; market-based mechanisms, such as a cap-and-trade system; and an AB 32 implementation regulation to fund the program.

The Scoping Plan called for a “coordinated set of strategies” to address all major categories of GHG emissions.<sup>20</sup> Transportation emissions were to be addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard,<sup>21</sup> and greater consideration

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18 Office of the Governor, Governor Brown Established Most Ambitious Greenhouse Gas Reduction Target in North America (April 29, 2015), <https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html>. Accessed April 2021.

19 CARB, Climate Change Scoping Plan: A Framework for Change, [https://www.arb.ca.gov/cc/scopingplan/document/adopted\\_scoping\\_plan.pdf](https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf). Accessed April 2021.

20 CARB, Climate Change Scoping Plan, p. ES-7.

21 Office of the Governor, Executive Order S-01-07, (January 18, 2007), <https://climateactionnetwork.ca/wp-content/uploads/2011/06/eos0107.pdf>. Accessed April 2021.

to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to implement energy efficiency practices. Utility energy supplies will change to include more renewable energy sources through implementation of the Renewables Portfolio Standard. This will be complemented with emphasis on local generation, including rooftop photovoltaics and solar hot water installations. Additionally, the Scoping Plan emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicated that substantial savings of electricity and natural gas would be accomplished through improving energy efficiency.

CARB updated the Scoping Plan in May 2014 (2014 Scoping Plan). The 2014 Scoping Plan<sup>22</sup> adjusted the 1990 GHG emissions levels to 431 million metric tons of carbon dioxide equivalents (MMTCO<sub>2</sub>e); the updated 2020 GHG emissions forecast is 509 MMTCO<sub>2</sub>e, which credited for certain GHG emission reduction measures already in place (e.g., the RPS). The 2014 Scoping Plan also recommended a 40 percent reduction in GHG emissions from 1990 levels by 2030, and a 60 percent reduction in GHG emissions from 1990 levels by 2040.

The 2017 Scoping Plan,<sup>23</sup> approved on December 14, 2017, builds on previous programs and takes aim at the 2030 target established by the SB 32 (Pavley), which is further discussed below. The 2017 Scoping Plan outlines options to meet California's aggressive goals to reduce GHGs by 40 percent below 1990 levels by 2030. In addition, the plan incorporates the State's updated RPS requiring utilities to procure 50 percent of their electricity from renewable energy sources by 2030. It also raises the State's Low Carbon Fuel Standard<sup>24</sup> and aims to reduce emissions of methane and hydrofluorocarbons by 40 percent from 2013 levels by 2030 and emissions of black carbon by 50 percent from 2013 levels.

The 2017 Scoping Plan<sup>25</sup> advises that absent conformity with a qualified GHG reduction plan, projects should incorporate all feasible GHG reduction measures and that achieving "no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development."

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22 CARB, First Update to the Climate Change Scoping Plan: Building on the Framework (May 2014).

23 CARB, California's 2017 Climate Change Scoping Plan, [https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf). Accessed April 2021.

24 Office of the Governor, Executive Order S-01-07, (January 18, 2007), <https://climateactionnetwork.ca/wp-content/uploads/2011/06/eos0107.pdf>. Accessed April 2021.

25 California Air Resources Board, 2017. California's 2017 Climate Change Scoping Plan. pp. 100-101. Available: [https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf). Accessed April 2021.

## **Advanced Clean Cars Regulations**

In 2012, CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for vehicle model years 2017–2025. The program combines the control of smog, soot, and GHGs with requirements for greater number of zero-emission vehicles. By 2025, when the rules will be fully implemented, automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.<sup>26</sup>

### **AB 197: Statewide GHG Emissions Limit**

On September 8, 2016, Governor Brown signed AB 197, which requires CARB to approve a Statewide GHG emissions limit equivalent to the Statewide GHG emission level in 1990 to be achieved by 2020.<sup>27</sup> AB 197 requires the CARB to prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions. The bill became effective on January 1, 2017.

## **Senate Bills**

### **Senate Bill 375**

SB 375, signed into law in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations.<sup>28</sup> The act requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) that prescribes land use allocation in that MPO's regional transportation plan (RTP). CARB, in consultation with MPOs, provided regional reduction targets for GHGs for the years 2020 and 2035.

### **Senate Bill X1-2: 2020 Renewable Portfolio Standard**

On April 12, 2011, California governor Jerry Brown signed SB X1-2.<sup>29</sup> This bill supersedes the 33 percent by RPS created by Executive Order S-14-08, previously signed by Governor Schwarzenegger. The RPS required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. A number of significant changes are made in SB X1-2. It extends application of the RPS to all electric retailers in the State, including municipal and public utilities, and community choice aggregators.

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26 CARB, The Advanced Clean Cars Program (January 18, 2018), <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program>. Accessed April 2021.

27 California Legislative Information, Assembly Bill No. 197 (September 8, 2016), [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160AB197](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB197). Accessed April 2021.

28 California Legislative Information, Senate Bill No. 375 (September 30, 2008), [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=200720080SB375](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375). Accessed April 2021.

29 California Energy Commission, Renewable Portfolio, <http://www.energy.ca.gov/portfolio>. Accessed April 2021.

SB X1-2 creates a three-stage compliance period for electricity providers to meet renewable energy goals: 20 percent of retail sales must be renewable energy products by 2013, 25 percent of retail sales must be renewable energy products by 2016, and 33 percent of retail sales must be renewable energy products by 2020. The 33 percent level must be maintained in the years that follow. This three-stage compliance period requires the RPS to be met increasingly with renewable energy that is supplied to the California grid and is located within or directly proximate to California. SB X1-2 mandates that renewables from this category make up:

- At least 50 percent for the 2011–2013 compliance period;
- At least 65 percent for the 2014–2016 compliance period; and
- At least 75 percent for 2016 and beyond.

SB X1-2 sets rules for the use of Renewable Energy Credits (RECs) as follows:

- Establishes a cap of no more than 25 percent unbundled RECs going toward the RPS between 2011 and 2013, 15 percent from 2014 to 2016, and 10 percent thereafter;
- Does not allow for the grandfathering of tradable REC contracts executed before 2010, unless the contract was (or is) approved by the California Public Utilities Commission (CPUC);
- Allows banking of RECs for 3 years only; and
- Allows energy service providers, community choice aggregators, and investor-owned utilities with 60,000 or fewer customers to use 100 percent RECs to meet the RPS.

SB X1-2 also eliminates the Market Price Referent, which was a benchmark to assess the above-market costs of RPS contracts based on the long-term ownership, operating, and fixed-price fuel costs for a new 500-megawatt (mW) natural-gas-fired, combined-cycle gas turbine.

### **Senate Bill 350: Clean Energy and Pollution Reduction Act**

SB 350, the Clean Energy and Pollution Reduction Act of 2015, was signed on October 7 of that year.<sup>30</sup> SB 350 implements some of the goals of Executive Order B-30-15 described above. The objectives of SB 350 are: (1) to increase the procurement of our electricity from renewable sources from 33 percent to 50 percent; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.<sup>31</sup>

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30 California Legislative Information, Senate Bill No. 350 (October 7, 2015), [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB350](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350). Accessed April 2021.

31 Senate Bill 350 (2015–2016 Reg, Session) Stats 2015, ch. 547.

### **Senate Bill 32 and Assembly Bill 197**

Enacted in 2016, SB 32 codifies the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that Statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. The reduction of GHG emissions is a priority for development projects throughout the State and is achieved through a combination of policies, planning, direct regulations, market approaches, incentives, and voluntary efforts. Generally speaking, the focus of GHG emission reductions is on energy production and motor vehicles.

SB 32 was coupled with a companion bill: AB 197. Designed to improve the transparency of CARB's regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning Statewide programs, policies and investments related to climate change. AB 197 also requires CARB to make certain GHG emissions inventory data publicly available on its website; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emission reductions; and include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

### ***Center for Biological Diversity v. California Department of Fish and Wildlife***

The California Supreme Court's decision published on November 30, 2015, in *Center for Biological Diversity v. California Department of Fish and Wildlife* (Case No. 217763; the Newhall Ranch case) reviewed the methodology used to analyze GHG emissions in an EIR prepared for a project that proposed 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in a rural area of the City of Santa Clara.<sup>32</sup> That EIR used the "business as usual" (BAU) methodology to determine whether the project would impede the State of California's compliance with statutory emissions reduction mandate established by the AB 32 Scoping Plan. The Court did not invalidate the BAU approach entirely, but did hold that:

*The Scoping Plan nowhere related that statewide level of reduction effort to the percentage of reduction that would or should be required from individual projects and nothing Department of Fish and Wildlife or Newhall have cited in the administrative record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy.*<sup>33</sup>

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32 California Department of Fish and Wildlife, Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan, <https://www.wildlife.ca.gov/regions/5/newhall>. Accessed April 2021.

33 *Center for Biological Diversity et al. v. California Department of Fish and Wildlife* (2015) (62 Cal.4th 204, 195 Cal.Rptr.3d 247, 361 P.3d 342).

The California Supreme Court suggested regulatory consistency as a pathway to compliance, stating that a Lead Agency might assess consistency with AB 32’s goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. The Court recognized that to the extent a project’s design features comply with or exceed the regulations outlined in the Scoping Plan, and adopted by CARB or other State agencies, a Lead Agency could appropriately rely on their use as showing compliance with performance-based standards adopted to fulfill a Statewide plan for the reduction or mitigation of greenhouse gas emissions. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of greenhouse gas emissions. Importantly, the Supreme Court also suggested “a lead agency may rely on existing numerical thresholds of significance for greenhouse gas emissions (*brightline threshold approach*).”<sup>34</sup>

## **California Energy Commission**

### **Building Energy Efficiency Standards**

Title 24, Part 6 of the California Code of Regulations (CCR), regulates the design of building shells and building components. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The CEC adopted the 2016 Building Energy Efficiency Standards (2016 Building Standards), effective January 1, 2017. The CEC adopted the 2019 Building Energy Efficiency Standards, and became effective January 1, 2020. Two key areas specific to nonresidential development in the 2019 standards focus on nonresidential ventilation requirements and nonresidential lighting requirements.<sup>35</sup> Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards.

The CPUC, CEC, and CARB also have a shared, established goal of achieving Zero Net Energy (ZNE) for new construction in California. The key policy timelines include (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030.

The ZNE goal generally means that new buildings must use a combination of improved efficiency and renewable energy generation to meet 100 percent of their annual energy need, as specifically defined by the CEC:

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34 The South Coast Air Quality Management District (SCAQMD), Interim CEQA Greenhouse Gas (GHG) Significance Thresholds, draft guidance document (October 2008), Attachment E, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf). Accessed April 2021.

35 California Energy Commission (CEC), 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, <https://www.energy.ca.gov/title24/2019standards/>. Accessed April 2021.

*A ZNE Code Building is one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building, at the level of a single “project” seeking development entitlements and building code permits, measured using the [CEC]’s Time Dependent Valuation (TDV) metric. A ZNE Code Building meets an Energy Use Intensity value designated in the Building Energy Efficiency Standards by building type and climate zone that reflect best practices for highly efficient buildings.<sup>36</sup>*

In addition to the CEC’s efforts, in 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (Part 11 of Title 24), commonly referred to as CALGreen, establish voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. CALGreen is periodically amended; the most recent 2019 standards became effective on January 1, 2020.

### ***Appliance Standards***

The CEC periodically amends and enforces Appliance Efficiency Regulations contained in Title 20 of the CCR. The regulations establish water and energy efficiency standards for both federally regulated appliances and non–federally regulated appliances. The most current Appliance Efficiency Regulations, dated July 2015, cover 23 categories of appliances (e.g., refrigerators; plumbing fixtures; dishwashers; clothes washer and dryers; televisions) and apply to appliances offered for sale in California.

## ***Regional***

### **South Coast Air Quality Management District**

The South Coast Air Quality Management District (SCAQMD) adopted a “Policy on Global Warming and Stratospheric Ozone Depletion” on April 6, 1990.<sup>37</sup> The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan (AQMP). In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;

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<sup>36</sup> CEC, 2015 Integrated Energy Policy Report (2015), p. 41.

<sup>37</sup> SCAQMD, SCAQMD’s Historical Activity on Climate Change, <http://www.aqmd.gov/nav/about/initiatives/climate-change>. Accessed April 2021.

- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In December 2008, SCAQMD adopted an interim 10,000 metric tons CO<sub>2</sub>e (MTCO<sub>2</sub>e) per year screening level threshold for stationary source/industrial projects for which SCAQMD is the lead agency. SCAQMD continues to consider adoption of significance thresholds for non-industrial development projects.<sup>38</sup> Specifically, SCAQMD has proposed combining performance standards and screening thresholds for the residential and commercial sectors. The performance standards primarily focus on energy efficiency measures beyond Title 24 and a screening level of 3,000 MTCO<sub>2</sub>e per year based on the relative GHG emissions contribution between residential/commercial sectors and stationary source (industrial) sectors.<sup>39</sup>

### **Southern California Association of Governments**

The City of Long Beach (City) is a member agency of the Southern California Association of Governments (SCAG). SCAG is the MPO for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for the discussion of regional issues related to transportation, the economy, community development, and the environment. As the federally-designated MPO for the Southern California region, SCAG is mandated by the federal government to research and develop plans for transportation, hazardous waste management, and air quality. Pursuant to California Health and Safety Code Section 40460(b),<sup>40</sup> SCAG has the responsibility for preparing and approving the portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is also responsible under the CAA for determining conformity of transportation projects, plans, and programs with applicable air quality plans.

With regard to GHG emissions, SCAG has prepared and adopted the 2020–2045 RTP/SCS,<sup>41</sup> which includes a Sustainable Communities Strategy that addresses regional development and growth forecasts. The SCAG

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38 SCAQMD, Greenhouse Gases: CEQA Significance Thresholds, <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds>. Accessed April 2021.

39 SCAQMD, Greenhouse Gases: CEQA Significance Thresholds, <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds>. Accessed April 2021.

40 California Health and Safety Code, Division 26. Air Resources, PART 3. Air Pollution Control Districts, Chapter 5.5. South Coast Air Quality Management District, ARTICLE 5. Plan, Section 40460(b). [https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=40460.&lawCode=HSC](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=40460.&lawCode=HSC). Accessed April 2021.

41 Southern California Association of Governments (SCAG), Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Draft, Chapter 1, <https://www.connectsocial.org/Pages/Connect-SoCal-Draft-Plan.aspx>. Accessed April 2021.

2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals, with a specific goal of achieving an 8 percent reduction in passenger vehicle GHG emissions on a per capita basis by 2020, 19 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level.

**Local**

**City of Long Beach General Plan**

Local jurisdictions, such as the City of Long Beach, have the authority and responsibility to reduce greenhouse gas emissions through their police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of greenhouse gas emissions resulting from its land use decisions.

The Air Quality Element of the City of Long Beach General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. While the Air Quality Element does not specifically address climate change, reductions in other pollutants typically lead to a reduction in GHG emissions. This Element acknowledges the interrelationships among transportation and land use planning in meeting the City’s goals. The following goals and policies are applicable to the Project.

**Goal 7:** Reduce emissions through reduced energy consumption.

**Policy 7.1:** Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

**Action 7.1.4:** Encourage the incorporation of energy conservation features in the design of all new construction.

**Action 7.1.7:** Support efforts to reduce GHG emissions that diminish the stratospheric ozone layer.

**City of Long Beach Sustainable City Action Plan**

Per CEQA Guidelines Section 15183.5, the City adopted the Sustainable City Action Plan on February 2, 2010. The Sustainable City Action Plan is intended to guide operational, policy and financial decisions to create a more sustainable City. The Sustainable City Action Plan includes initiatives, goals and actions that will move the City toward becoming more sustainable. The Sustainable City Action Plan includes chapters related to buildings and neighborhoods, energy, green economy and lifestyle, transportation, urban

nature, waste reduction, and water. Implementation of this plan would contribute to a reduction in the City's overall GHG emissions.

### **City of Long Beach Climate Action and Adaption Plan**

Pursuant to California SB 379, all California cities and counties are required to include climate adaptation and resiliency strategies in their general plans to ensure safety and protection of their community in the future. Currently, the City of Long Beach is in a multi-year effort to develop a Climate Change Action and Adaptation Plan that will provide a framework for creating or updating policies, programs, practices, and incentives for Long Beach residents and businesses to reduce the City's GHG footprint, and ensure the community and physical assets are better protected from the impacts of climate change. The City has prepared a proposed plan and is preparing an EIR for that plan with the expectation that the plan could be adopted in 2022.

The climate action/mitigation element of the Climate Change Action and Adaptation Plan will include the following steps:

- A GHG inventory of emissions from various sectors in the Long Beach community, such as building energy, transportation, solid waste, and wastewater.
- A forecast of projected emissions based on anticipated city growth.
- Development of GHG reduction targets based on the latest climate science, and local, regional, State, and federal context and requirements.
- Analysis of existing sustainability and climate mitigation efforts.
- Development of additional GHG mitigation strategies to reduce future emissions from key sectors.
- Development of a framework for implementing mitigation strategies.
- A plan to monitor the performance of the mitigation strategies using performance metrics to track GHG reduction targets.

### **City of Long Beach Municipal Code**

Section 21.45.400 of the Long Beach Municipal Code (LBMC) further regulates public and private development to include various standards that promote green buildings. A green building, also known as a sustainable building, is a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water and other resources more efficiently; and reducing the overall impact on the environment. The City of Long Beach recognizes the benefit of green buildings and establishes a green building program.

## City of Long Beach Green Building Ordinance

On May 12, 2009, the Long Beach City Council approved Ordinance No. ORD- 09-0013 (Subsection 21.45.400—Green Building Standards for Public and Private Development). The following types of project shall meet the intent of the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED®) program at the Certified level:

- A new residential or mixed use building of 50 dwelling units and 50,000 gross square feet or more.
- A new mixed use, or non-residential building of 50,000 square feet or more of gross floor area;
- The alteration of an existing residential or mixed use building that results in the addition of 50 dwelling units and 50,000 gross square feet or more;
- The alteration of an existing mixed use, or non-residential building that results in the expansion of 50,000 gross square feet or more; and
- A new construction or substantial rehabilitation project for which the City provides any portion of funding.

## 4. ENVIRONMENTAL IMPACTS

### ***Thresholds of Significance***

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to greenhouse gas emissions if it would:

**Threshold GRE-1:       Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

**Threshold GRE-2:       Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.**

Pursuant to CEQA Guidelines Section 15064.4, the methods suitable for analysis of GHG emissions are:

1. Use a model or methodology to quantify greenhouse gas emissions resulting from a project. The Lead Agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The Lead Agency should explain the limitation of the particular model or methodology selected for use.
2. Rely on a qualitative analysis or performance-based standards.

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Nor have SCAQMD, OPR, CARB, CAPCOA, or any other state or regional agency adopted a

numerical significance threshold for assessing GHG emissions that is applicable to the Project. However, the SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds. The SCAQMD proposed a tiered approach which includes a screening level of 3,000 MTCO<sub>2</sub>e per year for commercial/residential projects. For the purpose of evaluating the GHG impacts associated with the proposed Project, this analysis utilizes the proposed 3,000 MTCO<sub>2</sub>e per year threshold for commercial/residential projects.

Assessing the significance of a project's contribution to cumulative global climate change involves: (1) developing pertinent inventories of GHG emissions, and (2) considering project consistency with applicable emission reduction strategies and goals. As discussed previously, the City adopted the Sustainable City Action Plan per CEQA Guidelines Section 15183.5. As such, the Project's GHG analysis may "tier off" the City's General Plan and Sustainable City Action Plan to meet project-level CEQA evaluation requirements for GHG emissions.

### **Consistency Analysis**

The Project's GHG impacts are evaluated by assessing the Project's consistency with applicable GHG reduction strategies and local actions adopted by the City. As discussed previously, the City has established goals and actions to reduce the generation and emission of GHGs from both public and private activities in the City's Sustainable City Action Plan.

OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. The City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan, as recommended in the relevant amendments to the CEQA Guidelines. However, the City has adopted the City's Sustainable City Action Plan that encourages and requires applicable projects to implement energy efficiency measures. In addition, CARB's Climate Change Scoping Plan includes a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, market-based mechanisms, and an AB 32 implementation regulation. Thus, if the proposed Project is designed in accordance with these policies and regulations, the proposed Project would result in a less-than-significant impact, because it would be consistent with the overarching State regulations on GHG reduction (AB 32).

A consistency analysis is provided below and describes the Project's compliance with or exceedance of performance-based standards included in the regulations outlined in the applicable portions of CARB's Climate Change Scoping Plan, SCAG's 2020-2045 RTP/SCS, the City's Sustainable City Action Plan, and the City's General Plan.

## 5. METHODOLOGY

### Methodologies for Evaluating Significance

The analysis of the Project's GHG emissions consists of a quantitative analysis of the GHG emissions generated by the proposed Project and a qualitative analysis of the proposed Project's consistency with adopted GHG-related legislation, plans, and policies. This approach is in accordance with CEQA Guidelines Section 15064.4(a), which affirms the discretion of a lead agency to determine, in the context of a particular project, whether to use quantitative and/or qualitative methodologies to determine the significance of a project's impacts.

### Emissions Inventory Modeling

The California Emissions Estimator Model Version 2016.3.2, known as CalEEMod, is the CARB-approved computer program model recommended by SCAQMD for use in the quantification of air quality emissions, including GHG emissions. CalEEMod was developed under the auspices of SCAQMD, with input from other California air districts. CalEEMod utilizes widely accepted models for emissions estimates combined with appropriate data that can be used if site-specific information is not available. For example, CalEEMod incorporates USEPA-developed emission factors; CARB's on-road and off-road equipment emission models, such as EMFAC and OFFROAD;<sup>42</sup> and studies commissioned by other California agencies, such as the CEC and CalRecycle. Proposed Project development would generate GHG emissions from a number of individual sources during both construction and postconstruction (operational) use of the buildings and related activities (e.g., landscape maintenance). These individual sources collectively are hereafter referred to as the proposed Project's GHG emissions inventory.

CalEEMod version 2016.3.2 was used to quantify the Project's GHG emissions. CalEEMod provides a platform to calculate both construction emissions and operational emissions from a land use development project. The following GHG emission sources covered by CalEEMod model include:

- One-time construction emissions associated with grading, utility installation, building construction, application of architectural coatings (e.g., paint), and paving from emission sources that include both off-road construction equipment and on-road mobile equipment associated with workers, hauling, and the delivery of construction materials to the Project Site. Construction emissions associated with dust control and disposal of waste at landfills were also included.
- Operational emissions associated with the occupancy of development, such as on-road mobile vehicle traffic generated by the land uses; off-road emissions from landscaping equipment; energy (i.e., electricity and natural gas) and water usage in the buildings.

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42 EMFAC is an emissions factor model used to calculate emissions rates from on-road vehicles (e.g., passenger vehicles; haul trucks). OFFROAD is an emissions factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment). CalEEMod version 2016.3.2 utilizes CARB's 2014 version of EMFAC.

## 6. PROJECT IMPACTS

**Threshold GRE-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

### **Construction**

Construction activity impacts are relatively short in duration, so they contribute a relatively small portion of the total lifetime GHG emissions of a project. The combustion of fossil fuels in construction equipment results in GHG emissions of CO<sub>2</sub> and smaller amounts of CH<sub>4</sub> and N<sub>2</sub>O. Emissions of GHG would also result from the combustion of fossil fuels from vendor trucks delivering materials and construction worker vehicles commuting to and from the Project Site. Typically, light-duty and medium-duty automobiles and trucks would be used for worker trips and heavy-duty trucks would be used for vendor trips. The vast majority of motor vehicles used for worker trips rely on gasoline as an energy source while motor vehicles used for vendor trips would primarily rely on diesel as an energy source. In addition, GHG emissions-reduction measures for construction equipment are relatively limited. Therefore, in its *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Thresholds*, the SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies.

Construction assumptions used in the analysis of GHG emissions conservatively assume that the proposed Project would be constructed with the most intensive activities occurring on a daily basis. The total emissions from construction of the proposed Project are shown in **Table IV.G-3: Construction Annual Greenhouse Gas Emissions**.

**Table IV.G-3  
Construction Annual Greenhouse Gas Emissions**

<b>Year<sup>a</sup></b>	<b>MTCO<sub>2</sub>e</b>
2022	416
2023	2,507
2024	1,160
2025	1,000
2026	437
<b>Overall Total</b>	<b>5,520</b>
<b>30-Year Annual Amortized Rate</b>	<b>184</b>

Source: Refer to **Appendix IV.G.1: Section 2.1 Overall Construction**

Note: Totals in table may not appear to add exactly due to rounding in the computer model calculations.

MTCO<sub>2</sub>e = metric tons of carbon dioxide equivalent

As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the proposed Project (i.e., total construction GHG emissions were divided by 30 to determine annual construction emissions estimate that can be added to the proposed Project’s operational emissions) in order to determine the proposed Project’s annual GHG emissions inventory.<sup>43</sup> Total GHG emissions from the construction activities are forecast to be 5,520 MTCO<sub>2</sub>e. The total GHG emissions were amortized over a 30-year project lifetime and forecast to be 184 MTCO<sub>2</sub>e per year.

**Operation**

Emissions from mobile and area sources and indirect emissions from energy and water use, wastewater, as well as waste management would occur every year after buildout. This section addresses operational GHG emissions.

**Area Sources**

The area source GHG emissions included in this analysis result primarily from natural gas fireplaces with additional emissions from landscaping-related fuel combustion sources, such as lawn mowers. GHG emissions due to natural gas combustion in buildings other than from fireplaces are excluded from area sources since they are included in the emissions associated with building energy use.

The GHG emissions for the proposed Project were calculated using CalEEMod. No wood burning fireplaces were assumed, based on SCAQMD Rule 445, though natural gas hearths were included as a conservative analysis. CalEEMod defaults were used for landscape maintenance emissions. Area source emissions are shown in **Table IV.G-4: Area Source Greenhouse Gas Emissions**. As shown in **Table IV.G-4**, proposed Project emissions would result in approximately 50 MTCO<sub>2</sub>e per year from area sources.

**Table IV.G-4  
Area Source Greenhouse Gas Emissions**

Source	Unmitigated MTCO <sub>2</sub> e per year
Hearth	46
Landscaping	4
<b>Total</b>	<b>50</b>

Source: Refer to **Appendix IV.G.1** for Greenhouse Gas Emission Output.

43 SCAQMD Governing Board Agenda Item 31, December 8, 2008.

**Energy Sources**

GHGs are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO<sub>2</sub> and other GHGs directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emission in an indirect manner.

Estimated emissions from the combustion of natural gas and other fuels from the implementation of the proposed Project are calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for Southern California Edison were selected in CalEEMod. Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

Energy source emissions are shown in **Table IV.G-5: Energy Source Greenhouse Gas Emissions**. As shown in **Table IV.G-5**, the proposed Project would forecast to generate 219 MTCO<sub>2</sub>e per year from electricity consumption and 231 MTCO<sub>2</sub>e per year from natural gas consumption. Therefore, the total energy source emissions for the proposed Project would forecast to be 450 MTCO<sub>2</sub>e per year.

**Table IV.G-5  
Energy Source Greenhouse Gas Emissions**

Land Use	Electricity	Natural Gas
	Unmitigated MTCO <sub>2</sub> e per year	Unmitigated MTCO <sub>2</sub> e per year
Condo/Townhouses	106	130
Single-Family Housing	101	101
Parking	11	0
<b>Total</b>	<b>219</b>	<b>231</b>
<b>Total Energy Emissions</b>	<b>450</b>	

Source: Refer to **Appendix IV.G.1** for Greenhouse Gas Emission Output.

### **Mobile Sources Emissions**

Vehicle trips generated by growth within the Project Site vicinity would result in operational emissions through the combustion of fossil fuels. CO<sub>2</sub> emissions were determined based on the trip rates from the Traffic Impact Analysis (refer to **Appendix IV.L.1** of this Draft EIR). The Project Site is located within 0.5-mile of the major transit stop at Wardlow Road and Pacific Place; the LA Metro Blue Line (or A Line) Wardlow station. Moreover, Long Beach Transit (LBT) and LA Metro provide public transit services in the vicinity of the Project Site. The nearest bus stop could be found east of the Project Site at southeast Magnolia Avenue and Wardlow Road, where LBT Route 181 operates. As shown in **Table IV.G-6: Mobile Source Greenhouse Gas Emissions**, the Project's mobile source emissions would result in 1,800 MTCO<sub>2e</sub> per year.

**Table IV.G-6**  
**Mobile Source Greenhouse Gas Emissions**

Source	Unmitigated MTCO <sub>2e</sub> per year
Mobile (trips)	1,800
<b>Total</b>	<b>1,800</b>

*Source: Refer to **Appendix IV.G.1** for Greenhouse Gas Emission Output.*

### **Solid Waste Emissions**

Solid waste generation and associated emissions are calculated using default data found in CalEEMod for the proposed land uses. Disposal of organic waste in landfills can lead to the generation of CH<sub>4</sub>, a potent GHG. By generating solid waste, the proposed Project would contribute to the emission of fugitive CH<sub>4</sub> from landfills, as well as CO<sub>2</sub> and N<sub>2</sub>O from the operation of trash collection vehicles. As shown in **Table IV.G-7: Solid Waste Source Greenhouse Gas Emissions**, GHG emissions resulting from solid waste would forecast to be 79 MTCO<sub>2e</sub> per year.

**Table IV.G-7**  
**Solid Waste Source Greenhouse Gas Emissions**

Land Use	Unmitigated MTCO <sub>2e</sub> per year
Condo/Townhouses	35
Single-Family Housing	44
<b>Total</b>	<b>79</b>

*Source: Refer to **Appendix IV.G.1** for Greenhouse Gas Emission Output.*

**Water Consumption and Wastewater Emissions**

California’s water conveyance system is energy intensive, with electricity used to pump and treat water. The proposed Project would result in indirect GHG emissions due to water consumption and wastewater generation. Water consumption and wastewater generation, and their associated emissions, are calculated based on the square footage of the proposed uses, using CalEEMod data. As shown in **Table IV.G-8: Water Source Greenhouse Gas Emissions**, the Project’s water and wastewater GHG emissions would forecast to be 61 MTCO<sub>2</sub>e per year.

**Table IV.G-8  
Water Source Greenhouse Gas Emissions**

Land Use	Unmitigated MTCO <sub>2</sub> e per year
Condo/Townhouses	41
Single-Family Housing	20
<b>Total</b>	<b>61</b>

*Source: Refer to **Appendix IV.G.1** for Greenhouse Gas Emission Output.*

**Total Emissions**

As shown in **Table IV.G-9: Operational Greenhouse Gas Emissions**, the proposed Project is forecasted to generate a total of 2,622 MTCO<sub>2</sub>e per year. As such, the proposed Project would not exceed SCAQMD’s proposed threshold of 3,000 MTCO<sub>2</sub>e per year for commercial/residential projects. Moreover, the proposed Project would incorporate energy and water efficiency design features to enhance efficiency in all aspects of the buildings’ life cycle based on the latest CALGreen and Title 24 Building Energy Efficiency standards, as amended by the City, for new residential construction. The proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the certified level; thereby further reducing the Project’s GHG emissions as CalEEMod does not account for such reductions. As such, impacts related to direct and indirect emissions of greenhouse gas emissions would be less than significant.

**Table IV.G-9  
Operational Greenhouse Gas Emissions**

Source	Unmitigated MTCO <sub>2</sub> e per year
Construction (amortized)	184
Area	50
Energy	449
Mobile	1,800
Waste	79
Water	60
<b>Total</b>	<b>2,622</b>
<b>SCAQMD Proposed Threshold</b>	<b>3,000</b>
<b>Exceeds Threshold?</b>	<b>No</b>

Source: CalEEMod Emissions calculations are provided in **Appendix IV.G.1: Greenhouse Gas Emissions Model Output**.

Abbreviation: MTCO<sub>2</sub>e = metric tons of carbon dioxide emissions.

**Threshold IV.G-2: Would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?**

Compliance with applicable GHG emission reduction plans would result in a less than significant project-level and cumulative impact. The following section describes the extent the proposed Project complies with or exceeds the performance-based standards included in the regulations and policies outlined in CARB’s Climate Change Scoping Plan, SCAG’s 2020-2045 RTP/SCS, the City’s Sustainable City Action Plan, or the City’s General Plan. Key regulations incorporated into this analysis include California Code of Regulations, Title 20 and Title 24.

**Climate Change Scoping Plan**

**Table IV.G-10: Climate Change Scoping Plan Project Consistency Analysis** contains a list of GHG-reducing strategies set forth in the Climate Change Scoping Plan that are applicable to the proposed Project. The analysis presented in **Table IV.G-10** describes the proposed Project’s compliance and consistency with these strategies as outlined in the State’s Climate Change Scoping Plan to reduce GHG emissions. As shown in **Table IV.G-10**, the proposed Project would not conflict with the policies included in the Climate Change Scoping Plan.

**Table IV.G-10  
Climate Change Scoping Plan Project Consistency Analysis**

Regulation, Actions, and Strategies	Responsible Party(ies)	Proposed Project Consistency Analysis
<p><b>California Code of Regulations (CCR), Title 20:</b> The 2016 Appliance Efficiency Regulations, adopted by the California Energy Commission (CEC), include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.</p>	<p>State and CEC</p>	<p><b>No Conflict.</b> The proposed Project would develop new residential uses that would be outfitted with appliances and lighting that comply with CEC’s standards. These standards are included in the default parameters provided in CalEEMod and are reflected in the Project-related GHG emissions provided in <b>Table IV.G-9.</b></p>
<p><b>CCR, Title 24, Building Standards Code:</b> The 2019 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy.</p> <p>The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants.</p>	<p>State and CEC</p>	<p><b>No Conflict.</b> Consistent with regulatory requirements, the proposed Project would comply with applicable provisions of the California Green Building Standards Code.</p> <p>Moreover, the proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the certified level.</p>
<p><b>Assembly Bill 1109 (AB 1109):</b> The Lighting Efficiency and Toxic Reduction Act establishes standards structured to reduce average statewide electrical energy consumption by not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018.<sup>b</sup></p>	<p>State/ Manufacturers</p>	<p><b>No Conflict.</b> The proposed Project would not conflict with the requirements under AB 1109 because it would comply with local and state green building programs and incorporates energy efficient lighting and other required measures that would reduce electricity consumption.</p>
<p>By 2019, develop pricing policies to support low- GHG transportation (e.g., low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).</p>	<p>CalSTA, Caltrans, CTC, OPR/SGC, CARB</p>	<p><b>No Conflict.</b> The proposed Project would not conflict with this policy as this policy would not be implemented at the project level.</p>
<p><b>CCR, Title 24, Building Standards Code:</b> The California Green Building Standards Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20-percent overall water use reduction.</p>	<p>State</p>	<p><b>No Conflict.</b> Consistent with regulatory requirements, the proposed Project would comply with applicable provisions of the California Green Building Standards Code.</p> <p>Moreover, the proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the certified level.</p>
<p><b>CARB In-Use Off-Road Regulation:</b> CARB’s in-use off-road diesel vehicle regulation</p>	<p>CARB</p>	<p><b>No Conflict.</b> Construction contractors that would comply with this regulation would be</p>

Regulation, Actions, and Strategies	Responsible Party(ies)	Proposed Project Consistency Analysis
<p>(“Off-Road Diesel Fleet Regulation”) requires the owners of off-road diesel equipment fleets to meet fleet average emissions standards pursuant to an established compliance schedule.</p>		<p>used throughout proposed Project development.</p>
<p><b>CARB In-Use On-Road Regulation:</b> CARB’s in-use on- road heavy-duty vehicle regulation (“Truck and Bus Regulation”) applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.<sup>a</sup></p>	<p>CARB</p>	<p><b>No Conflict.</b> Construction contractors that would comply with this regulation would be used throughout proposed Project development.</p>
<p><b>Implement the Short-Lived Climate Pollutant Strategy by 2030:</b></p> <ul style="list-style-type: none"> <li>• 40-percent reduction in methane and hydrofluorocarbon emissions below 2013 levels.</li> <li>• 50-percent reduction in black carbon emissions below 2013 levels.</li> </ul>	<p>CARB, CalRecycle, CDFA, SWRCB, Local air districts</p>	<p><b>No Conflict.</b> Senate Bill 605 (SB 605) was adopted in 2014 which directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. Senate Bill 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels.<sup>b</sup></p> <p>The proposed Project would comply with the CARB SLCP Reduction Strategy which limits the use of hydrofluorocarbons for refrigeration uses.</p>
<p>By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.</p>	<p>CARB, CalRecycle, CDFA, SWRCB, Local air districts</p>	<p><b>No Conflict.</b> Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50 percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. In October 2020, CalRecycle released the proposed regulation text for the Short-lived Climate Pollutants (SLCP): Organic Waste Reductions program.<sup>c</sup></p> <p>The proposed Project would not conflict with AB 341 which requires not less than 75 percent of solid waste generated be source reduced through recycling, composting or diversion. Reduction in solid waste generated by the proposed Project would reduce overall GHG emissions. Compliance with AB 341 would also help achieve the goals of SB 1383.</p>

<sup>a</sup> CARB, *Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation*.  
<sup>b</sup> CARB, *Reducing Short-Lived Climate Pollutants in California*.  
<sup>c</sup> CalRecycle, *Short-Lived Climate Pollutants (SLCP): Organic Waste Reductions Proposed Methane Emissions Reductions, Proposed Regulation Text, October 2020*.  
 Source: Meridian Consultants, 2021.

**SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy**

A discussion of the Project’s consistency with the policies applicable to individual development projects in the 2020-2045 RTP/SCS is presented in **Table IV.G-11: SCAG 2020-2045 RTP/SCS Project Consistency Analysis**, below. As shown in **Table IV.G-11**, the proposed Project would not conflict with the 2020-2045 RTP/SCS.

**Table IV.G-11**  
**SCAG 2020-2045 RTP/SCS Project Consistency Analysis**

Goals and Policies	Consistency Analysis
<b>Goal 2:</b> Improve mobility, accessibility, reliability, and travel safety for people and goods.	<b>No Conflict.</b> The Project Site is located within 0.5-mile of the major transit stop at Wardlow Road and Pacific Place; the LA Metro Blue Line (or A Line) Wardlow station. Moreover, Long Beach Transit (LBT) and LA Metro provide public transit services in the vicinity of the Project Site. The proposed Project would include 5 acres of public open space that would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails. Additionally, the proposed Project would include bike parking consistent with the City’s Bicycle Master Plan. The location of the proposed Project encourages a variety of transportation options and access.
<b>Goal 3:</b> Enhance the preservation, security, and resilience of the regional transportation system.	<b>No Conflict.</b> While not necessarily applicable on a project-specific basis, the proposed Project would support this goal by improving the viability of alternative forms of transportation through higher density development. Moreover, the proposed Project would include pedestrian paths and bike parking consistent with the City’s Bicycle Master Plan. A robust variety of transportation options helps to ensure the mobility need of residents and visitors are met. Additionally, as discussed in the Traffic Impact Analysis ( <b>Appendix IV.L.1</b> ), the proposed Project would not result in significant transportation impacts.
<b>Goal 4:</b> Increase person and goods movement and travel choices within the transportation system.	<b>No Conflict.</b> While not necessarily applicable on a project-specific basis, the proposed Project would support this goal by improving local access to alternative forms of transportation, with appropriate design considerations to account for future population growth and multimodal choices.
<b>Goal 5:</b> Reduce greenhouse gas emissions and improve air quality.	<b>No Conflict.</b> The location of the proposed Project promotes the use of a variety of transportation options, which includes walking and the use of public transportation. As mentioned previously, the proposed Project would include pedestrian paths and bike parking

Goals and Policies	Consistency Analysis
	consistent with the City’s Bicycle Master Plan. These features would serve to reduce VMT which generates GHG’s.
<b>Goal 6:</b> Support healthy and equitable communities.	<b>No Conflict.</b> The proposed Project would place new residential units near a major transit stop. The location of the proposed Project promotes the use of a variety of transportation options, which includes walking and the use of public transportation. As mentioned previously, the proposed Project would include pedestrian paths and bike parking consistent with the City’s Bicycle Master Plan.
<b>Goal 7:</b> Adapt to a changing climate and support an integrated regional development pattern in transportation network.	<b>No Conflict.</b> This policy is directed towards SCAG to support regional development patterns areas. However, the proposed Project is an infill development located near a major transit stop which is consistent with this policy. In regard to adaptation to a changing climate, the proposed Project would comply with the California Green Building Standards Code (CALGreen). Moreover, the proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the certified level.
<b>Goal 8:</b> Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	<b>No Conflict.</b> This policy is directed towards SCAG to leverage the use of new transportation technologies using data-driven solutions. However, as stated above, the proposed Project is an infill development located near a major transit stop which is consistent with this policy.
<b>Goal 9:</b> Encourage development of diverse housing types in areas that are supported by multiple transportation options.	<b>No Conflict.</b> The proposed Project includes 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units. Of these, 5percent would be set aside as affordable housing. The Project’s units would be contributing to a range of housing choice and available to all persons, including existing employees and residents in the City. As stated above, the Project Site is located in an urbanized area in the City and is located near a major transit stop. The proposed Project would provide residents with convenient access to a major transit stop and opportunities for walking and biking as well.
<b>Goal 10:</b> Promote conservation of natural and agricultural lands and restoration of habitats.	<b>No Conflict.</b> This policy is directed towards SCAG and does not directly apply to the Project. However, the proposed Project includes bioremediation of an infill site and treating contaminated soil and subsurface material to remove harmful pollutants which may affect wildlife. In addition to developing residential uses, the proposed Project would include 5 acres of public open space.

Goals and Policies	Consistency Analysis
<p><b>Guiding Principle 2:</b> Place high priority for transportation funding in the region on projects and programs that improve mobility, accessibility, reliability and safety, and that preserve the existing transportation system.</p>	<p><b>No Conflict.</b> This policy is directed towards SCAG in allocating transportation system funding. However, the proposed Project would contribute to a safe, well maintained, and efficient multimodal transportation system. As discussed in the Traffic Impact Analysis (<b>Appendix IV.L.1</b>), the proposed Project would not result in significant transportation impacts.</p>
<p><b>Guiding Principle 3:</b> Assure that land use and growth strategies recognize local input, promote sustainable transportation options, and support equitable and adaptable communities.</p>	<p><b>No Conflict.</b> This Goal is directed towards SCAG and the City and does not apply it to individual development projects. However, as stated above, the Project Site is located in an urbanized area in the City and is located near a major transit stop.</p>
<p><b>Guiding Principle 4:</b> Encourage RTP/SCS investments in strategies that collectively result in reduced non-recurrent congestion and demand for single occupancy vehicle use, by leveraging new transportation technologies and expanding travel choices.</p>	<p><b>No Conflict.</b> This policy relates to SCAG goals in supporting investments and strategies to reduce congestion and the use of single occupancy vehicles. However, the proposed Project would support the policy as it is located near a major transit stop.</p>
<p><b>Core Vision Topic 1: Sustainable Development</b> Through our continuing efforts to better align transportation investments and land use decisions, we strive to improve mobility and reduce greenhouse gases by bringing housing, jobs and transit closer together.</p>	<p><b>No Conflict.</b> The proposed Project would comply with the California Green Building Standards Code (CALGreen), and would incorporate eco-friendly building materials, systems and high-performance building envelopment. Moreover, the proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the certified level.</p> <p>The proposed Project would place new residential units near a major transit stop. The location of the proposed Project promotes the use of a variety of transportation options, which includes walking and the use of public transportation. As mentioned previously, the proposed Project would include bike parking consistent with the City’s Bicycle Master Plan.</p>
<p><b>Core Vision Topic 4: Transit Backbone</b> Expanding the transit network and fostering development in transit-oriented communities is central to the region’s plan for meeting mobility and sustainability goals while continuing to grow the regional economy.</p>	<p><b>No Conflict.</b> This core vision topic is directed towards SCAG goals for the region and is not directly applicable to individual residential development projects. However, as stated above, the proposed Project would place new residential units near a major transit stop. The location of the proposed Project promotes the use of a variety of transportation options, which includes walking and the use of public transportation. As mentioned previously, the proposed Project would include pedestrian paths and bike parking consistent with the City’s Bicycle Master Plan</p>
<p><b>Core Vision Topic 5: Complete Streets</b> Creating “complete streets” that are safe and inviting to all roadway users is critical to increasing mobility</p>	<p><b>No Conflict.</b> This core vision topic is directed toward SCAG and is not specifically applicable to the Project. Nonetheless, the Project Site’s location near a major transit stop and the availability of bike parking located</p>

Goals and Policies	Consistency Analysis
<p>choices, reducing traffic fatalities and serious injuries and meeting greenhouse gas reduction targets.</p>	<p>on the Project Site would promote a variety of transportation options.</p>
<p><b>Core Vision Topic 6: Goods Movement</b>                      The efficient movement of goods is critical to a strong economy and improves quality of life in the SCAG region by providing jobs and access to markets through trade. However, increased volumes of goods moving across the transportation system contribute to greater congestion, safety concerns and harmful emissions. It is critical to integrate land use decisions and technological advancements to minimize environmental and health impacts while fostering continued growth in trade and commerce.</p>	<p><b>No Conflict.</b> This core vision topic is directed toward SCAG and is not specifically applicable to the Project. Nonetheless, the Project Site’s location near a major transit stop and the availability of bike parking located on the Project Site would promote a variety of transportation options to minimize environmental health impacts while fostering continued economic growth.</p>
<p><b>Sustainable Community Strategy 1: Focus Growth Near Destinations and Mobility Options</b></p>	
<p><b>Sustainable Community Strategy 1a:</b> Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations.</p>	<p><b>No Conflict.</b> The location of the proposed Project promotes the use of a variety of transportation options, which includes walking and the use of public transportation. As mentioned previously, the proposed Project would include pedestrian paths and bike parking consistent with the City’s Bicycle Master Plan.</p>
<p><b>Sustainable Community Strategy 1b:</b> Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets</p>	<p><b>No Conflict.</b> This strategy is directed toward SCAG and is not specifically applicable to the Project. Nonetheless, the proposed Project includes the development 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units near a major transit stop. Further, the location of the proposed Project promotes the use of a variety of transportation options, which includes walking and the use of public transportation.</p>
<p><b>Sustainable Community Strategy 1c:</b> Plan for growth near transit investments and support implementation of first/last mile strategies</p>	<p><b>No Conflict.</b> This strategy is directed toward SCAG and is not specifically applicable to the Project. Nonetheless, the proposed Project includes the development 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units near a major transit stop. As discussed in the Project’s Initial Study (see <b>Appendix IV.L.1</b>) the proposed Project is expected to result in an increase of approximately 624 residents, based on the City’s average household size as determined by the United States census bureau.</p>
<p><b>Sustainable Community Strategy 1d:</b> Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses.</p>	<p><b>No Conflict.</b> This strategy is directed toward SCAG and is not specifically applicable to the Project. Nonetheless, the proposed Project is an infill residential development that would add housing and increase the utilization of the Project Site, which is currently vacant.</p>
<p><b>Sustainable Community Strategy 1e:</b> Prioritize infill and redevelopment of underutilized land to accommodate</p>	<p><b>No Conflict.</b> This strategy is directed towards SCAG and the City and does not apply to individual development projects. Nonetheless, the proposed Project is an infill residential development that would add housing and</p>

Goals and Policies	Consistency Analysis
<p>new growth, increase amenities and connectivity in existing neighborhoods.</p>	<p>increase the utilization of the Project Site, which is currently vacant. As mentioned previously, the proposed Project would include pedestrian paths and bike parking consistent with the City’s Bicycle Master Plan.</p>
<p><b>Sustainable Community Strategy 1f:</b> Encourage design and transportation options that reduce the reliance on number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations).</p>	<p><b>No Conflict.</b> The location of the proposed Project promotes the use of a variety of transportation options, which includes walking and the use of public transportation. As mentioned previously, the proposed Project would include pedestrian paths and bike parking consistent with the City’s Bicycle Master Plan. Thus, the proposed Project would reduce VMT and promote alternatives to driving.</p>
<p><b>Sustainable Community Strategy 2: Promote Diverse Housing Choices</b></p>	
<p><b>Sustainable Community Strategy 2a:</b> Preserve and rehabilitate affordable housing and prevent displacement.</p>	<p><b>No Conflict.</b> Strategy 2a is directed towards SCAG and not does apply to the Project. Nonetheless, the proposed Project will provide a variety of dwelling units including 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units. Of these, 5percent would be set aside as affordable housing.</p>
<p><b>Sustainable Community Strategy 2b:</b> Identify funding opportunities for new workforce and affordable housing development.</p>	<p><b>No Conflict.</b> This strategy is directed towards SCAG in identifying funding opportunities for affordable housing development. Nonetheless, as stated above, the proposed Project is dedicating approximately 5percent of proposed units as affordable housing.</p>
<p><b>Sustainable Community Strategy 2d:</b> Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions.</p>	<p><b>No Conflict.</b> This strategy is directed towards SCAG and does not apply to individual development projects. Nonetheless, the proposed Project is an infill development located near a major transit stop. The location of the proposed Project promotes the use of a variety of transportation options, which includes walking, biking, and the use of public transportation. As discussed in <b>Section IV.B: Air Quality</b> and <b>Section IV.G: Greenhouse Gas Emissions</b>, operational emissions and greenhouse gas emissions generated by the proposed Project’s construction and operational activities would not exceed the regional thresholds of significance set by the SCAQMD and therefore, the proposed Project would be consistent with this strategy.</p>
<p><b>Sustainable Community Strategy 3: Leverage Technology Innovations</b></p>	
<p><b>Sustainable Community Strategy 3a:</b> Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking /drop off space.</p>	<p><b>No Conflict.</b> This strategy is directed towards SCAG and does not apply to individual development projects. Nonetheless, the Project’s 452 off-street parking garages would allow for electric vehicle (EV) charging.</p>

Goals and Policies	Consistency Analysis
<p><b>Sustainable Community Strategy 3c:</b> Identify ways to incorporate “micro-power grids” in communities, for example solar energy, hydrogen fuel cell power storage and power generation.</p>	<p><b>No Conflict. No Conflict.</b> This strategy is directed towards SCAG and does not apply to individual development projects. Nonetheless, the proposed Project would comply with the California Green Building Standards Code (CALGreen), and would incorporate eco-friendly building materials, systems, and features wherever feasible, including Energy Star appliances, water saving/low flow fixtures, non-VOC paints/adhesives, drought tolerant planting, and high-performance building envelopment.</p> <p>Moreover, the proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the certified level.</p>
<p><b>Sustainable Community Strategy 4: Support Implementation of Sustainability Policies</b></p>	
<p><b>Sustainable Community Strategy 4a:</b> Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions.</p>	<p><b>No Conflict.</b> This strategy is directed towards SCAG and does not apply to individual development projects. Nonetheless, the proposed Project is an infill development located near a major transit stop. The location of the proposed Project promotes the use of a variety of transportation options, which includes walking, biking, and the use of public transportation. As discussed in <b>Section IV.B: Air Quality</b> and <b>Section IV.G: Greenhouse Gas Emissions</b>, operational emissions and greenhouse gas emissions generated by the Project’s construction and operational activities would not exceed the regional thresholds of significance set by the SCAQMD and therefore, the proposed Project would be consistent with this strategy.</p>
<p><b>Sustainable Community Strategy 5: Promote a Green Region</b></p>	
<p><b>Sustainable Community Strategy 5b:</b> Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration.</p>	<p><b>No Conflict.</b> This strategy is directed towards SCAG and does not apply to individual development projects. Nonetheless, the proposed Project would provide new outdoor open space including 5 acres of public open space which would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails.</p>
<p><b>Sustainable Community Strategy 5d:</b> Promote more resource efficient development focus on conservation, recycling and reclamation.</p>	<p><b>No Conflict.</b> This strategy is directed towards SCAG and does not apply to individual development projects. Nonetheless, the proposed Project would comply with the California Green Building Standards Code (CALGreen), and would incorporate eco-friendly building materials, systems and high-performance building envelopment. Moreover, the proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the</p>

Goals and Policies	Consistency Analysis
	certified level. As such, the proposed Project would be consistent with promotion of efficient development and a focus on conservation.
<p><b>Sustainable Community Strategy 5e:</b> Preserve, enhance, and restore regional wildlife connectivity.</p>	<p><b>No Conflict.</b> This policy is directed towards SCAG and does not directly apply to the Project. As discussed above, development of the proposed Project would not remove any areas that have significant value as wildlife habitats given the fully graded and disturbed nature of the Project Site.</p>
<p><b>Sustainable Community Strategy 5f:</b> Reduce consumption of resource areas, including agricultural land.</p>	<p><b>No Conflict.</b> This policy is directed towards SCAG and does not directly apply to the Project. Nonetheless, development of the proposed Project would not remove any areas that have significant value as agricultural lands given the fully graded and disturbed nature of the Project Site.</p>
<p><b>Sustainable Community Strategy 5g:</b> Identify ways to improve access to public park space.</p>	<p><b>No Conflict.</b> This strategy is directed towards SCAG and does not apply to individual development projects. Nonetheless, the proposed Project would provide new outdoor open space including 5 acres of public open space which would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails. The looped trail in the proposed open space area would provide parcourse exercise equipment, a look-out point, and a butterfly garden along the route. The center of the looped trail will include a turf area large enough to accommodate a youth soccer field.</p>

Source: SCAG, Connect SoCal, 2020–2045 RTP/SCS, September 2020.

### City of Long Beach Sustainable City Action Plan

A discussion of the Project’s consistency with the relevant goals from the Long Beach Sustainable City Action Plan is presented in **Table IV.G-12: Sustainable City Action Plan Project Consistency Analysis** below. As shown in **Table IV.G-12**, the proposed Project would not conflict with the City’s Sustainable City Action Plan.

**Table IV.G-12  
Sustainable City Action Plan Project Consistency Analysis**

<b>Goals</b>	<b>Consistency</b>
<b>Buildings and Neighborhoods</b>	
At least 5 million square feet of privately developed LEED certified (or equivalent) green buildings by 2020	<b>No Conflict.</b> The proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the certified level. As such, the proposed Project would be consistent with this goal.
Plant at least 10,000 trees in Long Beach by 2020	<b>No Conflict.</b> The proposed Project would provide approximately 9.17 acres of landscaped area and open space, with an estimated 520 trees planted.
50 percent of Long Beach residents work in Long Beach by 2020	<b>No Conflict.</b> The proposed Project will provide a variety of dwelling units for Long Beach residents including 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units.
<b>Energy</b>	
Reduce community electricity use by 15 percent by 2020 Reduce community natural gas use by 10 percent by 2020	<b>No Conflict.</b> The proposed project would comply with the most recent Title 24 energy efficiency requirements, which would increase energy efficiency. Moreover, the proposed Project falls under Section 21.45.400.C.1.a of the LBMC which requires new residential or mixed use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross square feet or more to meet the intent of LEED at the certified level.
Facilitate the development of at least 8 Megawatts of solar energy within the community (private rooftops) by 2020.	<b>No Conflict.</b> In accordance with Title 24, the Project's residential uses would be required to be solar ready. Specifically, the proposed development's roofs must be designed with conduit pathways and clear, available space for a solar system regardless of whether or not the building owner expects to purchase a system.
<b>Transportation</b>	
Increase public transit ridership by 25 percent by 2016 Increase bike ridership from 1percent to 10 percent by 2016	<b>No Conflict.</b> The Project Site is located within 0.5-mile of the major transit stop at Wardlow Road and Pacific Place; the LA Metro Blue Line (or A Line) Wardlow station. Moreover, LBT and LA Metro provide public transit services in the vicinity of the Project Site.
Annual reduction in average pounds of solid waste generated per person per day	<b>No Conflict.</b> In the City, most trash is taken to the Southeast Resource Recovery Center (SERRF) to be incinerated and converted to electricity. Moreover, the City has an extensive recycling program that also helps reduce the amount of trash sent to SERRF and landfills. The proposed Project would participate in City programs intended to continue solid waste diversion.

Source: City of Long Beach, Sustainable City Action Plan, February 2010.

### ***City of Long Beach General Plan***

The Air Quality Element of the City of Long Beach General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. While the Air Quality Element does not specifically address climate change, reductions in other pollutants typically lead to a reduction in GHG emissions. This Element acknowledges the interrelationships among transportation and land use planning in meeting the City's goals. The following goals and policies are applicable to the Project.

**Goal 7:** Reduce emissions through reduced energy consumption.

**Policy 7.1:** Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

**Action 7.1.4:** Encourage the incorporation of energy conservation features in the design of all new construction.

**Action 7.1.7:** Support efforts to reduce GHG emissions that diminish the stratospheric ozone layer.

The proposed Project would be required to comply with the most recent Title 24 standards and the CalGreen Code. In addition to complying with Title 24 and CALGreen, the proposed Project would provide means for indirect energy savings, such as permitting individual solar panels to be applied to the proposed residential uses. This would be installed in compliance with Title 24 Section 110.10, which includes mandatory regulations for solar-ready buildings and would not preclude the use of alternate energy sources. Moreover, consistent with Section 21.45.400 of the LBMC, the proposed Project would be required to meet the LEED® program at the certified level and comply with the City's green building program. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water, and other resources more efficiently; and reducing the overall impact to the environment.

The Project Site is located within 0.5-mile of the major transit stop at Wardlow Road and Pacific Place; the LA Metro Blue Line (or A Line) Wardlow station. Moreover, LBT and LA Metro provide public transit services in the vicinity of the Project Site. The proposed Project would include 5 acres of public open space that would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails. Additionally, the proposed Project would include bike parking consistent with the City's Bicycle Master Plan. The location of the proposed Project encourages a variety of transportation options which would reduce VMTs. As such, the proposed Project would not conflict with the goals and policies in the General Plan's Air Quality Element.

## **Conclusion**

As shown in **Table IV.G-9**, the proposed Project would not exceed SCAQMD's proposed threshold of 3,000 MTCO<sub>2e</sub> per year threshold for commercial/residential projects. Moreover, as shown in **Table IV.G-10** through **Table IV.G-12**, the proposed Project would not conflict with CARB's Climate Change Scoping Plan, SCAG's 2020-2045 RTP/SCS, the City's Sustainable City Action Plan, or the City's General Plan. As such, impacts would be less than significant.

## **7. CUMULATIVE IMPACTS**

A listing of potential related projects located in the Project vicinity that might be developed or under construction within the same timeframe as the Project is located in **Table III-1: List of Related Projects in Section III: Environmental Setting**.

To achieve Statewide goals, CARB is continuing its ongoing process of updating, establishing, and implementing regulations to reduce Statewide GHG emissions. Currently, no applicable quantitative significance thresholds or specific reduction targets exist to assist in determining significance at the project or cumulative level. Additionally, currently no generally accepted methodology exists to determine whether GHG emissions associated with a specific project represent new emissions or existing and/or displaced emissions. Therefore, consistent with CEQA Guidelines Section 15064h(3), the City as a lead agency, has determined that the proposed Project's contribution to cumulative GHG emissions would be less than significant if the proposed Project is consistent with the applicable regulatory plans and policies to reduce GHG emissions. Accordingly, the analysis above took into account the potential for the proposed Project to contribute to the cumulative impact of global climate change. As stated above, the proposed Project would not result in a potentially significant impact because it would not conflict with CARB's Climate Change Scoping Plan, SCAG's 2020-2045 RTP/SCS, the City's Sustainable City Action Plan, or the City's General Plan. As such, cumulative impacts would be less than significant.

Related projects would generate both construction and operational GHG emissions during the life of each project. Given that the proposed Project would not have a potentially significant impact to GHG emissions, the proposed Project's contribution to cumulative impacts is not considered a significant impact.

## **8. MITIGATION MEASURES**

Impacts related to greenhouse gas emissions are less than significant and no mitigation measures are required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

No mitigation measures are required; impacts related to greenhouse gas emissions would remain less than significant.

## IV.H HAZARDS AND HAZARDOUS MATERIALS

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### 1. INTRODUCTION

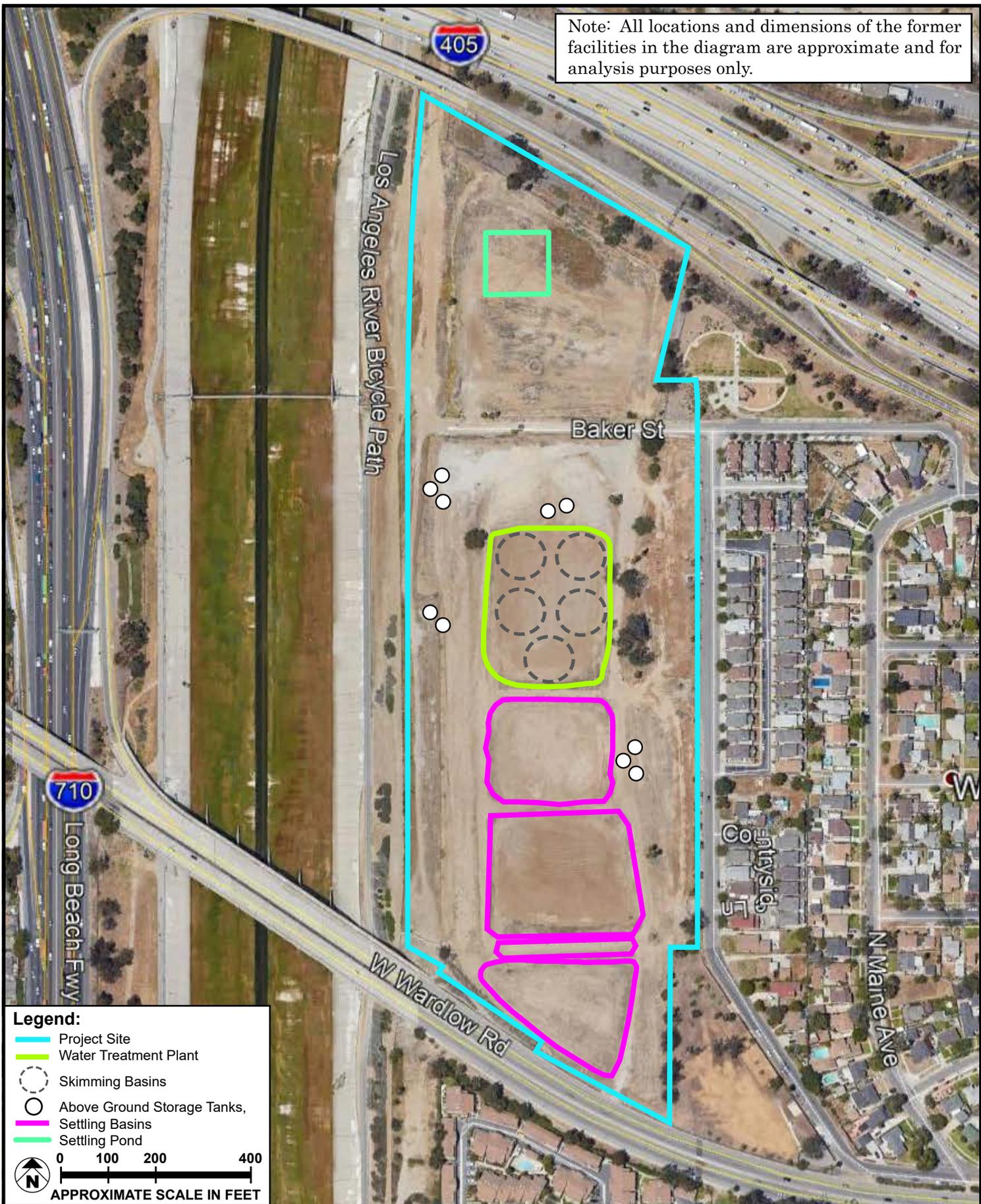
This section of the Draft EIR provides analysis of potential hazards and hazardous materials impacts. This section incorporates the following technical reports: (i) Expanded Interim Remedial Action – Installation and Startup Report (Expanded IRAP), by AECOM, March 31, 2020 (**Appendix IV.H.1: Expanded Interim Remedial Action Plan**); (ii) Document Review – Remedial Action Plan, Proposed River Park Residential Development (RAP Review), by Converse Consultants dated August 5, 2020 (**Appendix IV.H.2: Document Review – Remedial Action Plan**); (iii) Document Review, Proposed River Park Residential Development (Hazards Document Review), by Converse Consultants dated August 5, 2020 (**Appendix IV.H.3: Hazards Document Review**); (iv) the Remedial Action Plan (RAP), by California Environmental for Integral Partners for the Oil Operators Inc. (OOI) property dated August 2021 (see **Appendix IV.H.4: Draft Remedial Action Plan**); (v) Phase I Environmental Site Assessment, Tetra Tech, Inc. July 8, 2015; and (vi) Supplemental Site Investigation Report, Tetra Tech, Inc. July 15, 2015.

### 2. ENVIRONMENTAL SETTING

#### Historical Setting

The Project Site was used for the treatment of oil field production water and other fluids recovered from oil production activities from 1926 to 1988. The water treatment process initially took place in settling basins designed to remove oil and sediment from the produced water and discharge the treated water to the sewer system. Crude oil recovered from this process was recycled. In 1959, a wastewater treatment plant was constructed on the Project Site that consisted of five circular concrete-walled skimming basins and associated pumps, above ground storage tanks (ASTs), pipelines and related small buildings and facilities. As illustrated by **Figure IV.H.1: Former Water Treatment Facilities Diagram**, the facility was located north of the two rectangular-shaped, clay-lined settling basins that are still present in the southern portion of the site, south of Baker Street. A settling pond was also located north of Baker Street. Wastewater treatment operations ceased in 1998. Buildings, ASTs, and related aboveground structures (except for the concrete-walled skimming basins and small concrete-lined vaults with control valves) were cleaned, demolished, and removed from the Site in 2000 and 2001. The two large settling basins were later reconfigured for use as bioremediation basins to treat oily residual soil.

Note: All locations and dimensions of the former facilities in the diagram are approximate and for analysis purposes only.



SOURCE: Google Earth - 2021

FIGURE IV.H-1

## **Existing Conditions**

Currently, the Project Site is vacant and fenced with a mix of chain link fences, wooden fences, and hedges. Access to the Project Site is secured by gates adjacent to Wardlow Road and Golden Avenue. The vacant site contains some remnants of the water treatment facilities removed in 2000 and 2001, such as building foundations, roads, and underground pipes.

The Project Site contains two bioremediation basins, which are large flat areas. Elevations on the property range from 20 to 40 feet.

The primary chemicals of concern (COCs) present on the Project Site associated with past operations include hydrocarbons (e.g. diesel and oil), as well as elevated concentrations of lead and arsenic, as described further below.

## **Remediation Activities**

In October 2000, the City of Long Beach Fire Department (LBFD) directed that wastewater and sludge be removed from the Site and that soil and groundwater impacted by contaminants be remediated under a Site Remediation Permit overseen by the City's Fire Department and Department of Health and Human Services (LBDHHS). A 2002 Consent Decree between the City and Oil Operators formalized the remediation requirements and a Corrective Action Plan to implement bioremediation of oil-impacted soil was approved by the City in 2003.<sup>1</sup> Bioremediation of oily soil has been ongoing in the large rectangular basins since that time. The lead oversight agency for the soil remediation is LBDHHS. The Los Angeles Regional Water Quality Control Board (LARWQCB) is the oversight agency for groundwater monitoring.

The process of bioremediation employs the use of living organisms such as microbes and bacteria to naturally break down and detoxify contaminants in soil without removing the soil from the ground. Regular tilling of the top foot of soil introduces oxygen and moisture to enhance the effectivity of the bioremediation. At the Project Site, the bioremediation process will reduce the amount of oily soil and return the soil to a state that is not hazardous or harmful to human beings. Soil that cannot feasibly be addressed through bioremediation will be excavated for removal to an off-site disposal facility. In short, the remediation activities will result in a site that eliminates human health risks associated with the former oil activities on site.

Removing contaminants from the soil also removes the source of contaminants that can affect the groundwater through infiltration. Oil Operators maintains a number of groundwater monitoring wells on

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<sup>1</sup> Mearns Consulting LLC. Human Health Risk Assessment- 712 Baker Street Long Beach, California 90806. January 14, 2016.

the Project Site and samples the wells periodically to monitor the level of chemicals present in the groundwater. The levels of contaminants in groundwater are expected to decrease over time as the contaminants in the overlying soil are remediated. Contaminants in groundwater also decrease through degradation by natural processes. To date, no remediation of the groundwater has been required of Oil Operators.

Three subsurface pipelines that historically contained petroleum products, including crude oil and gasoline, are present beneath Golden Avenue to the east of the Project Site. These pipelines are owned and operated by independent oil companies including Tesoro Logistic Operations, successor to BP Pipelines, the previous pipeline operator.

Benzene and other volatile organic compounds (VOCs) found in gasoline were detected in soil vapor samples collected near the eastern edge of the Project Site. Benzene is a known carcinogen. Soil vapor (also called soil gas) refers to the air below ground that surrounds soil particles. The source of the benzene is believed to be a leak from one or more of the pipelines beneath Golden Avenue adjacent to the Project Site. A soil vapor extraction system (SVE) that pumps air out of the ground and conveys it to a treatment system was installed in 2012 and initially operated by Oil Operators. Cleanup orders were issued by the LARWQCB to multiple oil companies, including BP Pipelines in 2012 and Tesoro Logistic Operations LLC (successor to BP Pipelines) assumed responsibility for the vapor extraction and related remedial work required under the order. This led to the development, approval, and the implementation of the Tesoro Expanded Remedial Action Plan for additional SVE wells in 2017 and the plan was further amended in 2018. The Plan involves the installation of twelve horizontal SVE wells and four angled SVE wells to extend beneath Golden Avenue from the east side of the Project Site and five vertical SVE wells beneath the Project Site.<sup>2</sup>

Methane has also been detected in soil gas at the Project Site in levels exceeding regulatory thresholds. Methane is a combustible gas that is a byproduct of the bioremediation or natural degradation of petroleum-impacted soil. Methane is commonly found in oil-producing regions. Methane at the Project Site will be addressed through a vapor mitigation system incorporated into the building foundation plans for the Project.

### ***Remedial Action Plan***

In August 2021, a Remedial Action Plan (RAP) was prepared by California Environmental for the Project Site and submitted to the LARWQCB for review and approval (see **Appendix IV.H.4**). The RAP identifies

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2 California Environmental. Remedial Action Plan- Proposed Residential Redevelopment Project Oil Operators, Inc. (OOI) Property. August 2019.

additional actions to address the remaining soil and groundwater contamination present on the Project Site and to achieve risk-based cleanup goals approved by LARWQCB that will assure the site is safe for residential land use. Implementation of the RAP will lead to the issuance of a No Further Action determination by the LARWQCB, the lead enforcement agency. The RAP includes a plan of implementation and specific standards to determine the effectiveness of the remediation program.

The RAP was developed using the data collected from the extensive soil, soil vapor, and groundwater assessment investigations conducted by the OOI site from 1984 through 2018. The type and extent of the soil and groundwater contamination on the property was characterized and delineated. The RAP includes the following proposed remedial activities:

(1) South of Baker: This area of the Project Site is proposed for residences and the remedial approach will attain the risk-based concentrations established as cleanup levels (RBCs) for residential use developed in the Mearns HHRA. Soil impacted with petroleum hydrocarbons (e.g. diesel, oil, gasoline) will be bioremediated to achieve the cleanup levels. Soil that cannot feasibly be bioremediated within the timeframe of the Project will be excavated and transported to a disposal or recycling facility licensed to accept the soil. Soil containing lead and arsenic in levels that exceed the RBCs will be excavated and transported to a disposal or recycling facility licensed to accept the soil. To address VOCs in soil vapor, engineered vapor mitigation systems approved by LARWQCB will be installed as an element of the foundation systems beneath homes or other occupied structures.

(2) North of Baker: This area is proposed for open space, so the remedial approach is consistent with that future use. Soil in the top ten feet containing COCs that exceed the RBCs will be bioremediated or excavated and transported to a disposal or recycling facility licensed to accept the soil. Containment of remaining contaminants will be achieved with an engineered cap. Bioventing wells will be installed to address deeper soil impacted by petroleum hydrocarbon contamination.

The remedial measures proposed in the RAP are presented in **Table IV.H-1: Proposed COC Mitigation Measures**.

**Table IV.H-1  
Proposed COC Mitigation Measures**

COC		Location	Proposed Mitigation Measure
Vapor Phase	Methane	NoB	Engineered Cap
		SoB	Engineering control – vapor intrusion membrane – residential/ VES implemented by Tesoro
	TPH-g/VOCs	NoB	None (no structures)
		SoB	Engineering control - passive, membrane –residential/ VES implemented by Tesoro
Soil	TPH	NoB	Engineered Cap
	Lead		Engineered Cap
	Arsenic		Engineered Cap
	TPH	SoB	Bioremediated to RBCs or dispose off site
	Lead		Remove and dispose > RBC within the REI
	Arsenic		Remove and dispose > RBC within the REI
Groundwater	TPH-g/VOCs	NoB & SoB	RP for pipeline release to implement clean-up as required by LARWQCB
	Arsenic		Remediation not required - Monitor

Source: California Environmental Remedial Action Plan. 2019.

Note: NoB= North of Baker Street, SoB= South of Baker Street, RBC= Risk-Based Concentrations

**Interim Remedial Action Plan**

Tesoro has conducted interim remedial action in the form of soil vapor extraction (SVE) system since 2015, in accordance with the approved September 30, 2014 IRAP. An Expanded IRAP was required by the directive from the LARWQCB dated April 8, 2016, and a Revised Expanded IRAP was required in a follow up letter dated February 7, 2018. A Revised Expanded IRAP was prepared and submitted to LARWQCB on October 31, 2018 and conditionally approved in a letter dated December 27, 2018. The date for submittal of the IRAP documenting the installation and startup of the expanded SVE system was extended in letters from the LARWQCB dated August 2, 2019 and January 24, 2020.

Per the LARWQCB December 27, 2018 approval letter, the IRAP was required to include, at a minimum, the following:

1. Scaled maps showing the locations of the soil borings, vapor extraction wells, treatment compound, and remediation piping;
2. Data tables showing any collected analytical test results;
3. Laboratory reports, chain-of-custody documentation, and QA/QC data;

4. Soil boring logs;
5. Vapor extraction well construction details;
6. Copies of all necessary permits from appropriate agencies; and
7. Conclusions and recommendations

On March 31, 2020, an expanded IRAP prepared by AECOM was submitted to LARWQCB by Tesoro to further remediate the area contaminated from off-site sources near the Project Site. Specifically, this is the area identified as “the SVE Area” in **Figure IV.H.2: SVE Area**, where OOI, and later Tesoro, operated a SVE system. The objective of the expanded interim remedial action is to mitigate impacts in the vadose zone,<sup>3</sup> particularly where concentrations of benzene in soil and soil vapor are the highest. This expanded IRAP fulfills the LARWQCB outlined requirements in the approval letter dated December 27, 2018.

A human health risk assessment conducted in 2016 at the Project Site identified no vapor intrusion health risks from subsurface impacts at the Project Site, including in the SVE Area (See **Appendix IV.H.1**). Soil vapor from each extraction well will be monitored to evaluate and optimize system performance in accordance with the Revised Expanded IRAP. Monitoring Reports will be submitted to the LARWQCB on a quarterly basis in accordance with requirements defined by the LARWQCB for submittal on July 31, October 31, January 31, and April 30.

### ***Soils and Soil Vapor***

Soil vapor investigations conducted at the Project Site from 2012 to 2015 were summarized in quarterly monitoring reports and documented the presence of methane, volatile organic compounds and total petroleum hydrocarbons in the gasoline and light hydrocarbon range (TPH-g). The on-site VOCs in the soil vapor are related to the Tesoro pipeline leaks.

The presence of methane on the Project Site is a result of the active TPH bioremediation cells on-site along with the biologic breakdown of the TPH in the upper portions of the soil. Elevated concentrations of methane exist in the eastern, central and southern portions of the Project Site. The highest methane concentrations were detected beneath Basins 1 and 2 on the Project Site. These locations are within the active bioremediation zone where pockets of elevated methane are expected as a byproduct of the bioremediation process. Methane gas concentrations have typically been lower outside of the bioremediation areas. The highest TPH concentrations exist adjacent to historical pipeline leaks.

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3 Vadose zone refers to the unsaturated zone. The vadose zone extends from the top of the ground surface to the water table.

The RAP identified the Soil Clean- Up Goals listed below (see **Appendix IV.H.1**) as being levels that present no significant risk to human health. Thus, achieving these maximum contaminant levels, as required by the LARWQCB, assures that the Project Site is safe for future residents. TPH in soil based upon carbon range (upper 0-10 ft):

- C4-C12 < 100 mg/Kg
- C13-C22 < 260 mg/Kg upper 5 ft; 1,000 mg/Kg 5-10 ft
- C23-C32 < 5,000 mg/Kg
- C32-C40 < 6,500 mg/Kg
- Lead in soil ≤ 80 mg/Kg (upper 10 ft)

***Arsenic in soil ≤ 10 mg/Kg (upper 5 ft; 12 mg/Kg 5-10 ft) Groundwater***

Groundwater beneath the eastern portion of the Project Site is impacted with TPH-g and VOCs that migrated onto the Site from off-site pipeline releases as illustrated in **Figure IV.H-5: TPH in Groundwater** and **Figure IV.H-6: Benzene in Groundwater** below. Accumulations of gasoline products from Tesoro were found in groundwater on the Project Site during monitoring from 2013 to 2019. Arsenic is present in groundwater at concentrations up to 0.711 mg/L, which is more than the maximum contaminant level (MCL) of 0.01 mg/L. The MCL is the drinking water standard. **Figure IV.H-7: Arsenic in Groundwater** shows the concentration contour of arsenic within the groundwater on-site. The concentrations of arsenic found in groundwater on the Project Site are correlated with the presence of TPH in the groundwater. No COCs were identified in the groundwater in the most recent quarterly groundwater monitoring; as such, this indicates that that the existing COCs on the Project Site, such as TPH and lead, are not impacting the groundwater quality beneath the Site.

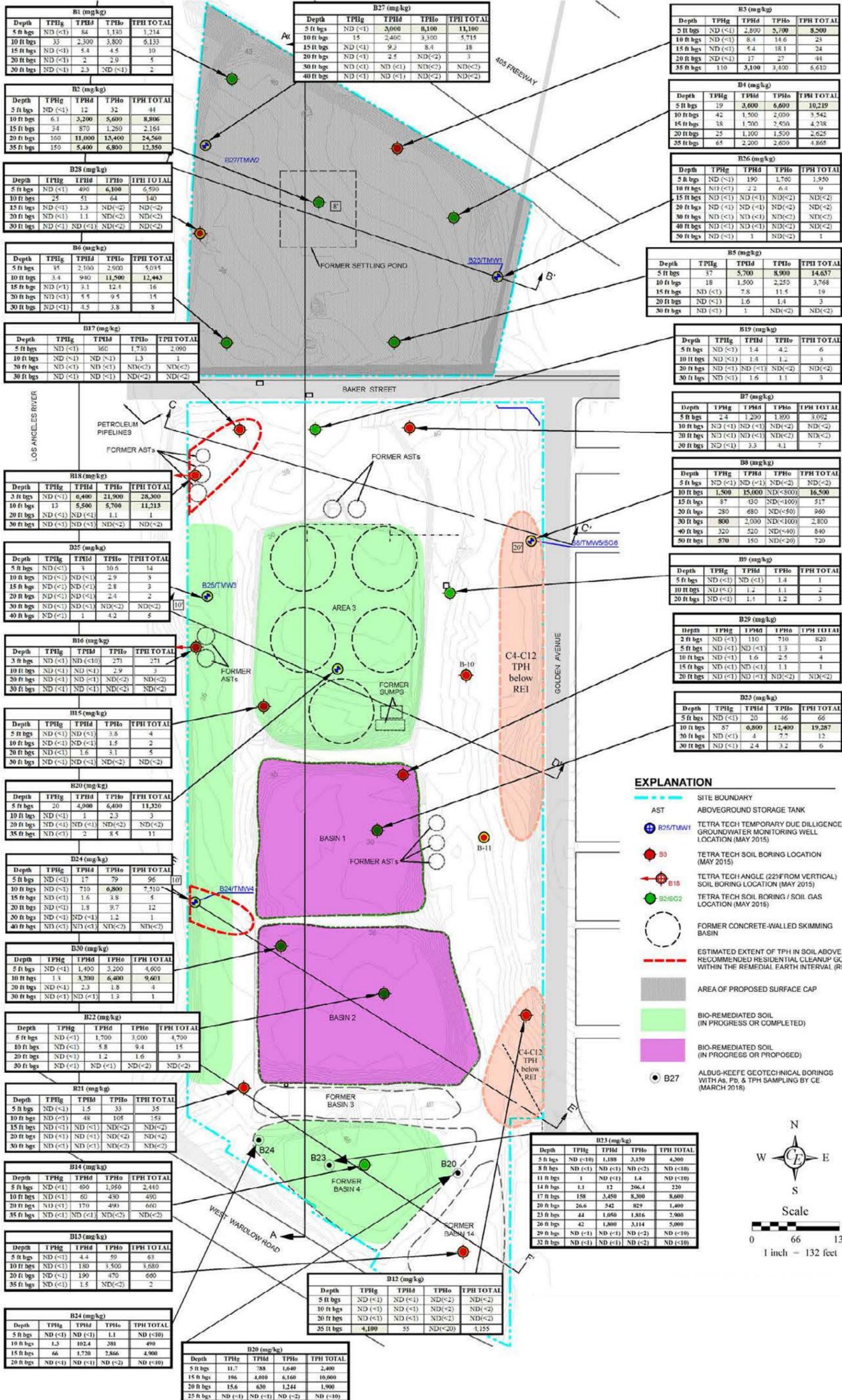


SOURCE: AECOM - 2020

FIGURE IV.H-2



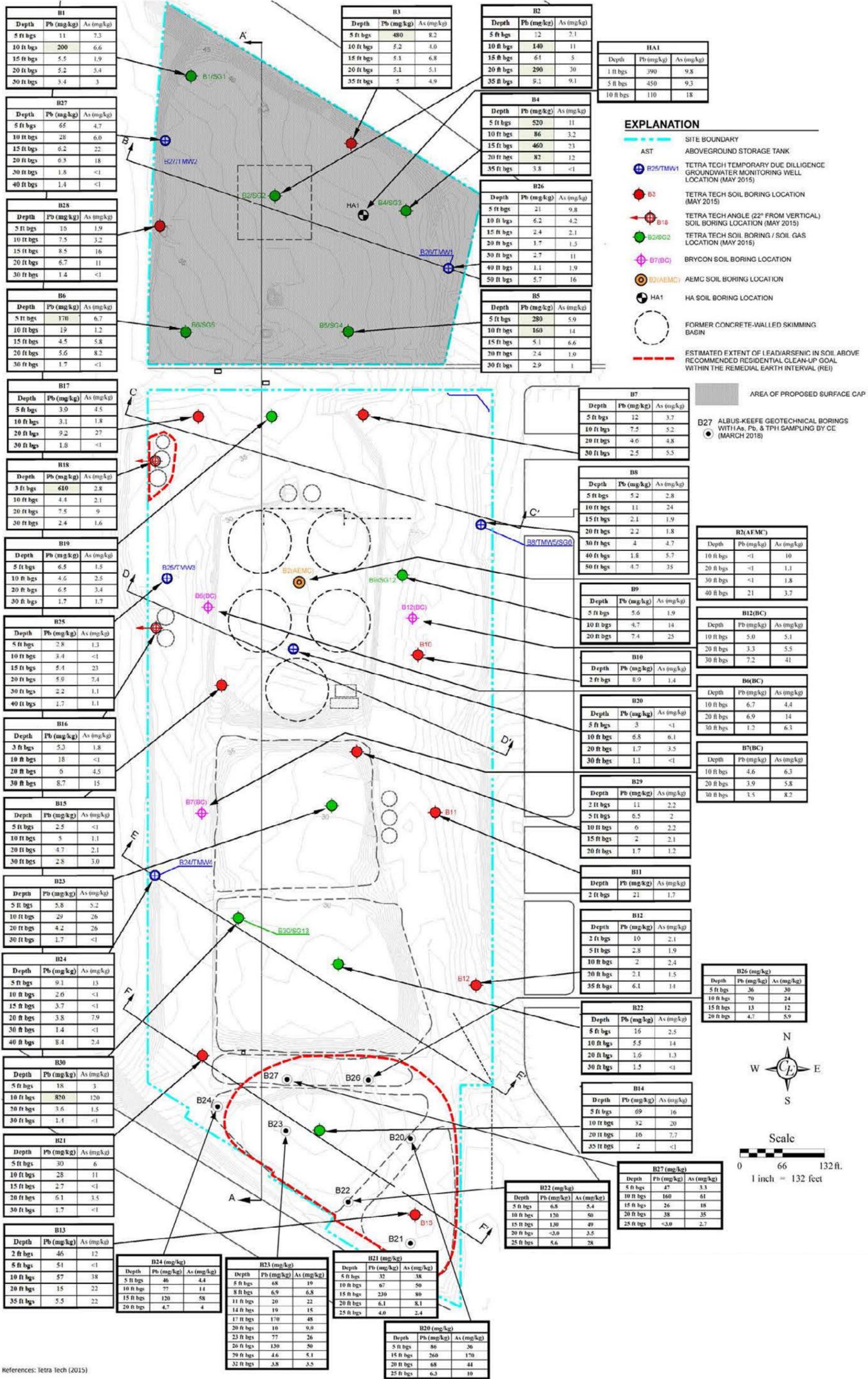
SVE Area



References: Tetra Tech (2015)

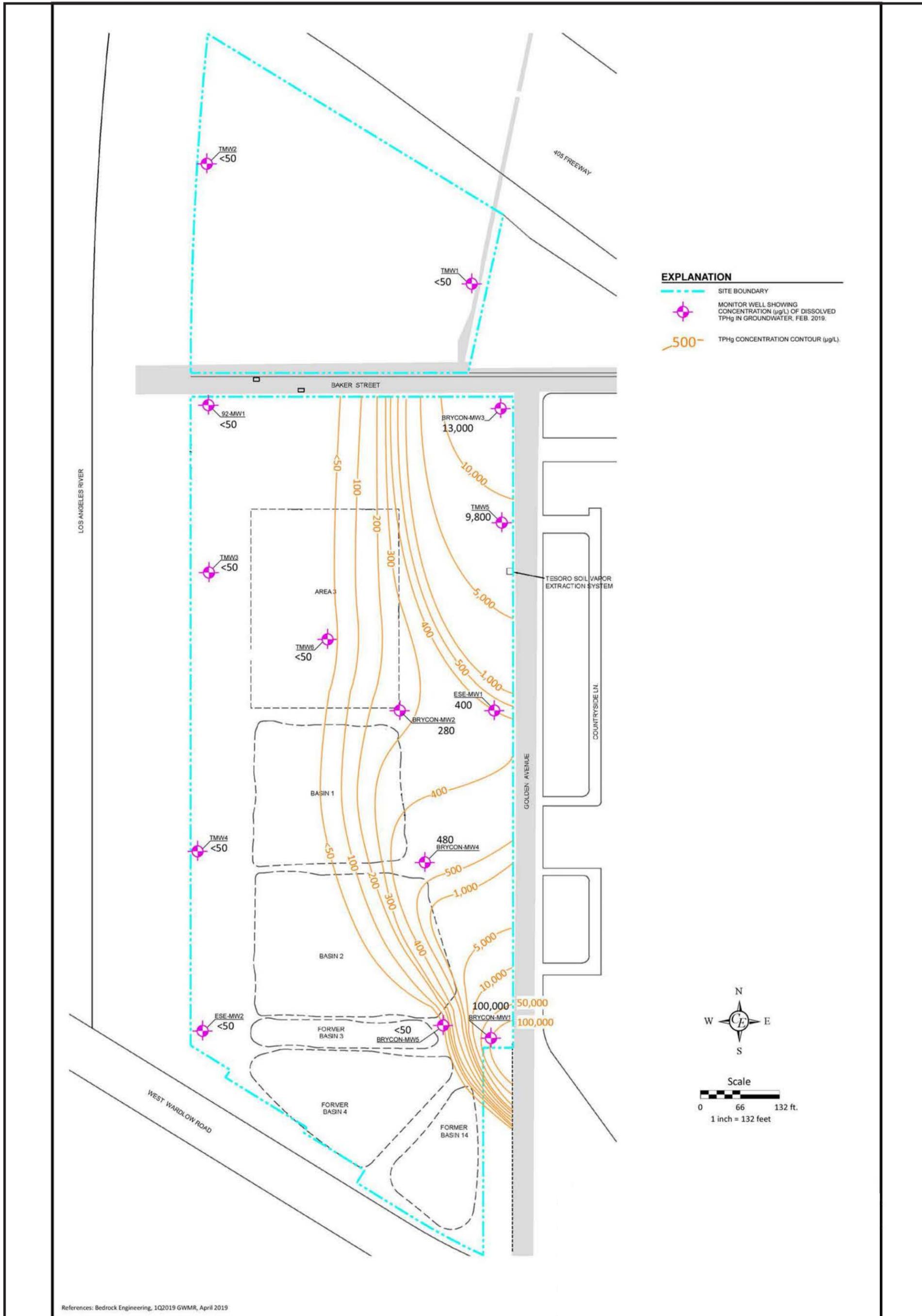
SOURCE: California Environmental - 2019

FIGURE IV.H-3



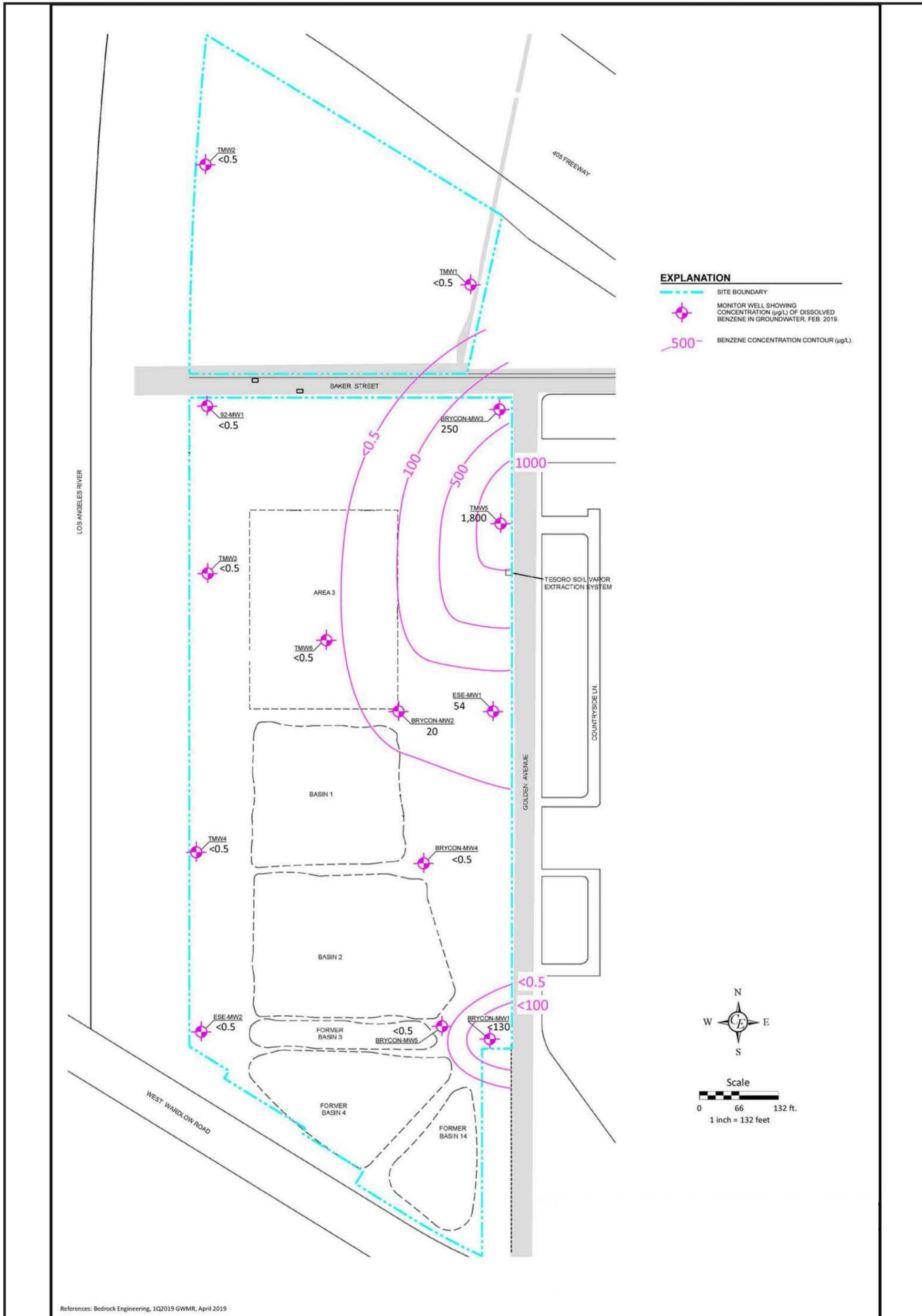
SOURCE: California Environmental - 2019

FIGURE IV.H-4



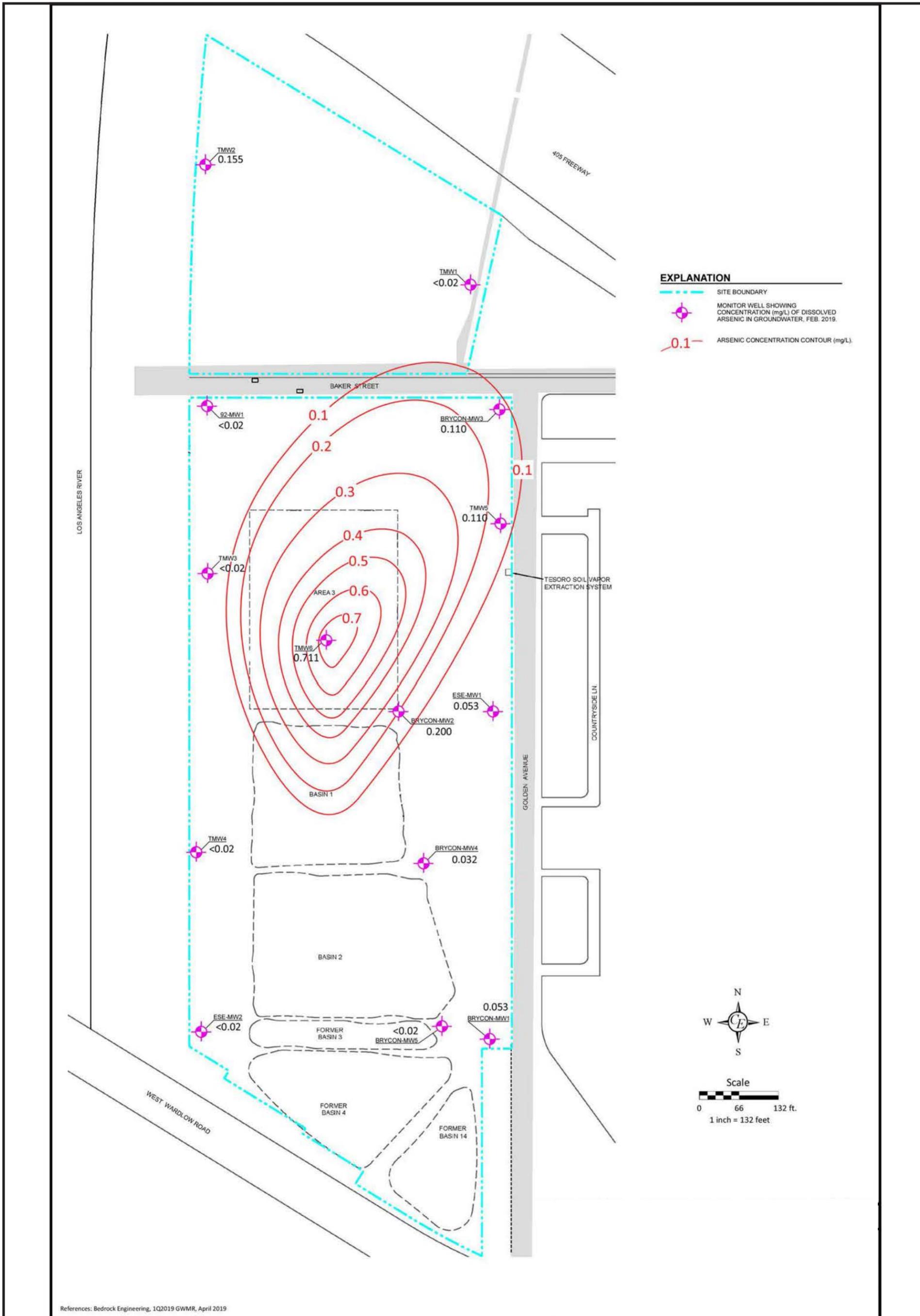
SOURCE: California Environmental - 2019

FIGURE IV.H-5



SOURCE: California Environmental - 2019

FIGURE IV.H-6



SOURCE: California Environmental - 2019

FIGURE IV.H-7

### 3. REGULATORY SETTING

There are several federal, State, regional, and local regulations that govern the generation, handling, use, storage, and disposal of hazards and hazardous materials. These regulations are complex and have varying degrees of overlap. They address a myriad of aspects associated with hazards and hazardous waste, including: (1) the use, storage, and management of hazardous materials; (2) the generation, handling, and disposal of hazardous waste; (3) underground storage tanks; (4) aboveground storage tanks; (5) asbestos; (6) lead-based paint; (7) polychlorinated biphenyls; (8) oil wells; and (9) oil field-related activities and methane gas. Each of these categories and relevant regulations governing them are discussed below.

#### **Hazardous Materials Use, Storage, and Management**

##### ***Emergency Response and Community Right-to-Know Act***

In 1986, Congress adopted the Emergency Planning and Community Right-to-Know Act (42 U.S. Code Sections 11001–11050) as Title III of the federal Superfund Amendments and Reauthorization Act. This Act establishes reporting and planning requirements for businesses that handle or store specified hazardous materials. These reports and plans provide federal, State, and local emergency planning and response agencies with information about the amounts of potentially hazardous materials that businesses use, release, and/or spill. They also provide the public with information about potential hazards in their communities. In California, many of the requirements of the Emergency Planning and Community Right-to-Know Act overlap with regulations adopted under the State’s Waters Bill and La Follette Bill, both of which are discussed below. The Emergency Planning and Community Right-to-Know Act consists of four separate programs that include requirements for planning for emergency response; requirements for reporting leaks and spills; requirements for reporting hazardous materials inventories; and annual reporting of total releases of specified “toxic chemicals.”

##### ***Waters Bill***

Businesses in California that handle hazardous materials are required to comply with California’s Hazardous Materials Release Response Plans and Inventory Law (Assembly Bill [AB] 2185; Health and Safety Code Section 25500 et seq.), also known as the Waters Bill. Basic requirements of hazardous materials planning under this legislation include the development of detailed inventories of the hazardous materials used and stored on-site, a program of employee training for hazardous materials release response, and the identification of emergency contacts and response procedures. Any facility that meets minimum thresholds for established categories of waste must comply with the reporting requirements and file a business emergency plan with the local administering agency. The local administering agency within the Project area is the Lbfd. The Lbfd refers to the required business emergency plan as a Hazardous Materials Business Emergency Plan. The Hazardous Materials Business Emergency Plan must

include a complete inventory of all hazardous materials used and stored at a site in quantities above the associated thresholds and a program of employee training for hazardous materials releases.

### ***Unified Hazardous Waste and Hazardous Materials Management Regulatory Program***

In 1994, Senate Bill (SB) 1082 established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. The Long Beach Certified Unified Program Agency (CUPA) is designed to consolidate and administer hazardous material permits, inspections, and enforcement activities throughout the City's jurisdiction. Oversight of the Long Beach CUPA is shared by the Lbfd and the Long Beach Health Department.<sup>4</sup>

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program consolidates and coordinates the six State programs that regulate business and industry use, storage, handling, and disposal of hazardous materials and hazardous wastes. The CUPA requirements include submittal of the following: Business Information Form; Hazardous Materials System BP-8 Computer Listing of Inventory Submitted; Annual Inventory Update Form; and Regulated Substance Registration Form.

### ***La Follette Bill***

The La Follette Bill (AB 3777; Health and Safety Code Sections 25531 et seq.) requires risk planning and accident prevention provisions for facilities that use or store Acutely Hazardous Materials. Acutely Hazardous Materials (known as Extremely Hazardous Substances under the Emergency Planning and Community Right-to-Know Act) are defined as any chemical designated as an extremely hazardous substance in the Code of Federal Regulations, Title 40, Part 355 (40 Code of Federal Regulations 355), Appendix A. Under the La Follette Bill, facilities that store or utilize certain types and quantities of hazardous materials at or above the thresholds defined by the bill may be required to develop Risk Management Plans. Risk Management Plans require management, engineering, and safety studies, as well as the construction of physical improvements, if warranted, designed to minimize the potential for hazardous materials accidents and, if an accident does occur, to minimize the impacts of such an event. Risk Management Plans are process-specific rather than project-specific. As such, they focus on the use of hazardous materials in various operations. Quantity thresholds as defined under the bill vary for different hazardous constituents. The La Follette Bill requires that Risk Management Plans be updated every three years for continuing operations or whenever the process changes to the extent that the current Risk Management Plan does not reflect the revised process.

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<sup>4</sup> Long Beach Fire Department, Long Beach CUPA, [www.longbeach.gov/fire/fire-prevention/cupa/](http://www.longbeach.gov/fire/fire-prevention/cupa/), accessed April 2021.

The State Office of Emergency Services has delegated authority to local agencies to administer the Waters and La Follette Bills. In the City of Long Beach (City), the LBFD issues permits for hazardous materials handling (in accordance with the La Follette Bill), enforces AB 2185 (per the Waters Bill), and administers the applicable sections of the Long Beach Fire Code, including Chapter 8.86 (Hazardous Materials Release Response Plans and Inventory). As the administering agency, the City of Long Beach requires that Risk Management Plans be filed with the Long Beach Division of Environmental Health and with the LBFD. The LBFD administers the requirements of these bills through a combination of Fire Department inspections, plan checks, disclosure requirements associated with Hazardous Materials Business Plans, and requirements for the preparation and filing of Risk Management Plans. Any business handling hazardous materials (as defined in Section 25500 of California Health and Safety Code, Division 20, Chapter 6.95) is required to obtain a local fire department permit and register the business as a hazardous materials handler.

### ***Federal and California Occupational Safety and Health Acts***

The federal Occupational Safety and Health Act of 1970, as amended, which is implemented by the Occupational Safety and Health Administration (OSHA) (29 United States Code, Sections 651–678) also contains provisions with respect to hazardous materials management. Federal Occupational Safety and Health Act requirements, set forth in 29 Code of Federal Regulations Section 1910 et seq., are designed to promote worker safety, worker training, and worker right-to-know policies. A major component of the federal regulations is the requirement that employers implement the Occupational Safety and Health Act Hazard Communication Standard to provide information to employees about the existence and potential risks of exposures to hazardous substances in the workplace. As part of the Hazard Communication Standard, employers must obtain material safety data sheets from chemical manufacturers that identify the types and handling requirements used in given areas and make this data available to their employees; label chemical containers in the workplace; develop and maintain a written hazard communication program; and develop and implement programs to train employees about hazardous materials. Employers are also required to train a team of employees to appropriate federal Occupational Safety and Health Act-defined levels, to respond to accidental releases of hazardous materials, and, as appropriate, to retain on-call contractors to perform hazardous materials accidental release responses (per 29 Code of Federal Regulations 1910.120, Hazardous Waste Operations and Emergency Response Standards).

Since the State of California has a State plan with provisions at least as stringent as those required by the federal OSHA, the United States Department of Labor has delegated the authority to administer the Occupational Safety and Health Act regulations to the State. The California Occupational Safety and Health Act program (codified in California Code of Regulations, Title 8, and in the Labor Code Sections 6300–6719)

is administered and enforced by the Division of Occupational Safety and Health (DOSH, but better known as Cal/OSHA), a unit of California's Department of Industrial Relations.

The State Act is similar to the federal program, but in addition to the provisions identified above, it requires employers to implement a comprehensive, written Injury and Illness Prevention Program. This employee safety program covers the full range of potential workplace hazards, including those associated with hazardous materials.

### ***Uniform Fire Code***

The Uniform Fire Code regulates the types, configuration, and quantities of hazardous materials that can be stored within structures. The Uniform Fire Code also regulates the storage of hazardous materials (e.g., storage tanks) in outdoor areas. These regulations are implemented by the Lbfd through regular inspections of on-site operations and through issuance of notices of violation in cases where storage facilities do not meet code requirements. In addition to regulations governing hazardous materials handling, there are reporting requirements associated with a hazardous materials release. These reporting provisions require, in some instances, notification of the local CUPA, the State Office of Emergency Services, and National Response Center, if warranted.

### ***City of Long Beach Municipal Code***

Title 8, Health and Safety, of the Long Beach Municipal Code (LBMC) addresses codes and measures regarding hazardous materials. Chapter 8.85 (Underground and Aboveground Storage Tanks) designates the City to prevent injury or damage to businesses or property due to air pollution. Chapter 8.86 (Hazardous Materials Release Responses Plans and Inventory) designates the Long Beach CUPA as the local authority for underground and aboveground storage tank compliance. Chapter 8.87 (Hazardous Waste Control) designates the Long Beach CUPA as the local authority to enforce California Health and Safety Code Division 20, Chapter 6.5. Chapter 8.88 (Hazardous Materials Clean-Up) requires site characterization, site remediation, and initial and final reports for contaminated sites in accordance with State and local laws and regulations.

### ***City of Long Beach General Plan Public Safety Element***

The City's General Plan Public Safety Element was adopted in May 1975 and includes policy guidelines related to the City's safety goals, fire protection, geologic hazards, crime prevention, utilities, industrial/transportation, disaster operations, and risk management, and also includes program and ordinance recommendations. The fire protection section of the Public Safety Element presents established fire demand zones determined on the basis of hazards, station locations, manpower, and equipment. Specific fire hazardous land uses are delineated, and fire protection measures are recommended. Through

the City's Department of Emergency Preparedness, elaborate provisions for disaster operations have been established where manpower, communications, evacuation, community resources, and safety for citizens are discussed and reviewed. The Risk Management section of the Public Safety Element discusses factors related to risk management and the process of establishing levels of acceptable risk regarding a variety of potential hazards, including oil storage tanks and tank rupture. The Public Safety Element is a planning document that primarily addresses hazards that could affect large segments of the population and does not include specific regulatory requirements.

## **Hazardous Waste Generation, Handling, and Disposal**

### ***Federal Resource Conservation and Recovery Act and California Hazardous Waste Control Law***

The federal Resource Conservation and Recovery Act (RCRA) (42 United States Code Sections 6901–6992k) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. Under RCRA regulations, hazardous wastes must be tracked from the time of generation to the point of disposal. The RCRA program also establishes standards for hazardous waste treatment, storage, and disposal units, which are intended to manage hazardous wastes in a manner that minimizes present and future threats to the environment and human health. At a minimum, each generator of hazardous waste must register and obtain a hazardous waste activity identification number. If hazardous wastes are stored for more than 90 days or treated or disposed of at a facility, any treatment, storage, or disposal unit must be permitted under RCRA.

RCRA classifies users that generate greater than 1,000 kilograms (approximately 2,205 pounds) per month of non-acutely hazardous waste as “large quantity generators.” Large quantity generators are subject to the life cycle hazardous waste management requirements of RCRA. RCRA requires large quantity generators to maintain inspection logs of hazardous storage locations, records of the quantity of hazardous waste being generated and stored on-site, manifests of pick-ups of these wastes from the Site by licensed hazardous waste transporters, and records from the licensed treatment/storage/ disposal facilities which receive and ultimately treat or dispose of the waste.

RCRA allows individual states to develop their own programs for the regulation of hazardous waste as long as they are at least as stringent as the federal act. The State of California has developed the California Hazardous Waste Control Law (Health and Safety Code Section 25100 et seq.; 22 California Code of Regulations Section 66260.1 et seq.), which is modeled closely after RCRA. However, unlike RCRA, the Hazardous Waste Control Law does not recognize a threshold below which generators are exempt from some or all of the Hazardous Waste Control Law requirements.

The United States Environmental Protection Agency (USEPA) has delegated Statewide RCRA enforcement to the State of California. Primary authority for the Statewide administration and enforcement of Hazardous Waste Control Law rests with the California Environmental Protection Agency's (CalEPA) Department of Toxic Substances Control (DTSC). The DTSC has delegated to local agencies the authority to inspect and regulate hazardous waste generators. As previously indicated, the LBFD is a CUPA under the Unified Program, as described above.

Both RCRA and the Hazardous Waste Control Law require businesses to prepare biennial hazardous waste reports that identify the nature and quantity of each type of hazardous waste generated and the treatment, disposal method, and facilities used for each waste (40 Code of Federal Regulations 262.41(a) and 22 California Code of Regulations 66262.41). These reports must be submitted to the DTSC.

### ***Federal and California Occupational Safety and Health Acts***

The federal OSHA and Cal/OSHA regulations also contain worker safety provisions with respect to routine hazardous waste management operations and emergency responses involving hazardous wastes. The provisions are included in the Hazardous Waste Operations and Emergency Response Standard (29 United States Code 651 et seq.; 29 Code of Federal Regulations 1910.120; 40 Code of Federal Regulations 311), which requires a written health and safety program, worker training, emergency response training, medical surveillance, and measures to reduce worker exposure to hazardous waste.

### ***Hazardous Materials Transportation Act***

The Hazardous Materials Transportation Act regulates transport of hazardous materials on water, rail, highways, airplanes, and pipelines.<sup>5</sup> The U.S. Department of Transportation (DOT) administers the Act.<sup>6</sup> Title 49 of the CFR specifies additional requirements and regulations with respect to the transport of hazardous materials. Title 49 of the CFR requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Drivers are also required to be trained in function and commodity specific requirements. In addition, vehicles transporting certain types or quantities of hazardous materials must display placards (warning) signs. Transporters of hazardous wastes must be permitted and have an identification number.

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5 49 USC Section 1801 et seq., (1975).

6 49 CFR Section 100 et seq., (2016).

## ***Uniform Fire Code***

The Uniform Fire Code regulates hazardous waste storage facilities through regular site inspections by the LBFD and through the issuance of notices of violations and subsequent code enforcement in cases where storage facilities do not meet code requirements.

## **Underground Storage Tanks**

### ***Resource Conservation and Recovery Act, Subtitle I***

In 1984, Congress adopted a national underground storage tank (UST) regulatory program (42 United States Code 6991 et seq.), commonly referred to as RCRA Subtitle I. Regulations implementing this program are found at 40 Code of Federal Regulations 280. Subtitle I authorized the USEPA to issue regulations establishing minimum standards for new and existing (those installed after December 22, 1988) USTs. The program outlines strict standards for upgrading existing USTs and associated piping; installing new USTs; corrosion protection for USTs and associated piping; spill and overfill protection; leak detection, reporting of releases, and corrective actions; on-site practices and record keeping; UST closure standards; and financial responsibility requirements for owner and operators of USTs. After 1998, all nonconforming tanks were required to be upgraded or closed.

### ***California Code of Regulations and California Health and Safety Code***

Prior to the adoption of the federal UST regulatory program, in 1983 the State of California initiated its own regulation of USTs storing hazardous substances. California Health and Safety Code, Division 20, Chapter 6.7, governs the UST program, and the California Code of Regulations Title 23, Division 3, Chapter 16 and Chapter 18 regulates the program. The State's UST program regulates various elements including registration of USTs; permitting of USTs; establishment of UST construction and operational standards; installation of leak detection systems and/or monitoring of USTs for leakage; establishment of UST closure requirements; licensing of UST contractors; establishment of financial responsibility requirements; release reporting and corrective action; and enforcement.

The State's UST program has been amended frequently to incorporate the federal requirements. As with the federal standards, the State's UST program required that all tanks have leak detection, corrosion protection, and spill and overflow devices by December 1998. USTs that did not meet the 1998 requirements were required to be immediately retrofitted or removed.

The State Water Resources Control Board (SWRCB) oversees the Statewide UST program (23 California Code of Regulations Section 2610 et seq.). The administration of the UST regulatory and permit program is performed by local agencies. In the City of Long Beach, the administration of the UST program is under the jurisdiction of the LBFD. The responsibility for oversight of leaking USTs (LUSTs) typically lies with the

LARWQCB if the release poses a threat to groundwater. The City's UST regulations are contained in LBMC Chapter 18.48, also known as the Long Beach Fire Code.

## **Aboveground Storage Tanks**

In 1989, California established the Aboveground Petroleum Storage Act instituting a regulatory program covering ASTs containing specified petroleum products (Health and Safety Code Sections 25270–25270.13). The Aboveground Petroleum Storage Act applies to facilities that have a storage capacity of 10,000 gallons or more or are subject to oil pollution prevention and response requirements under 40 Code of Federal Regulations Part 112 of the Clean Water Act. Oil pollution prevention requirements must be met if the facility has a cumulative aboveground oil storage capacity of 1,320 gallons or more and may reasonably be expected to discharge oil in harmful quantities into navigable waters. DTSC regulations may apply if ASTs contain hazardous waste and are stored longer than 90, 180, or 270 days (depending on other criteria).

Under the Aboveground Petroleum Storage Act, each owner or operator of a regulated AST facility must file biennially a storage statement with the SWRCB disclosing the name and address of the AST facility; the contact person for the facility; and the location, size, age, and contents of each AST that exceeds 10,000 gallons in capacity and that holds materials that are at least five percent petroleum. In addition, each owner or operator of a regulated AST must prepare a Spill Prevention Control and Countermeasure Plan in accordance with federal and State requirements (40 Code of Federal Regulations 112 and Health and Safety Code Section 25270.5[c]). The intent of this plan is to minimize the potential for accidental release of oil or petroleum products into or upon the navigable waters of the United States or adjoining shoreline. Compliance is required for facilities that have a total aboveground oil storage capacity in excess of 1,320 gallons or a total UST oil storage capacity in excess of 42,000 gallons (unless the USTs are subject to all the technical requirements of 40 Code of Federal Regulations 280 or a State program approved under requirements of 40 Code of Federal Regulations 281).

Groundwater monitoring also may be required if the tank exterior surface, connecting piping, and the floor directly beneath the tank cannot all be monitored by direct viewing. Notification to the State Office of Emergency Services is required immediately upon discovery of any spill or release of 42 gallons or more of petroleum (per Health and Safety Code Section 25270.8). Currently, the responsibility for inspecting ASTs and ensuring that Spill Prevention Control and Countermeasure Plans have been prepared lies with the local agency authorized by CalEPA as the Certified Unified Program Agency (CUPA), which in this case is the Long Beach Fire Department and Department of Health and Human Services.

## **Asbestos**

### ***Toxic Substances Control Act***

In 1976, the federal Toxic Substances Control Act (TSCA) (15 United States Code Sections 2601–2671) established an evaluation system to identify chemicals that may pose hazards. TSCA also established a process by which public exposure to hazards may be reduced through manufacturing, distribution, use, and disposal restrictions or labeling of products. Under TSCA, the USEPA has enacted strict requirements on the use, handling, and disposal of asbestos-containing materials (ACMs). These regulations include the phasing out of friable asbestos and ACMs in new construction materials beginning in 1979 (per 40 Code of Federal Regulations 763).<sup>7</sup> In addition, due to potential adverse health effects in exposed persons, in 1989 the USEPA banned most uses of asbestos in the country. Although most of the ban was overturned in 1991, the current banned product categories include corrugated paper, roll board, commercial paper, specialty paper, flooring felt, and any new uses. TSCA is enforced by the USEPA through inspections of places in which ACMs are manufactured, processed, and stored and through the assessment of administrative and civil penalties and fines, as well as injunctions against violators.

### ***Federal Resource Conservation and Recovery Act and State Hazardous Waste Control Law***

Under the federal RCRA, asbestos is not regulated as hazardous waste, but under the State Hazardous Waste Control Law, it is considered a “non-Resource Conservation and Recovery Act” or “California-only” hazardous waste. The DTSC classifies ACMs as hazardous waste if they are friable and contain 1 percent or more asbestos (California Code of Regulations, Title 22, Section 66261.24). Nonfriable bulk asbestos-containing waste is considered by the DTSC as nonhazardous regardless of its asbestos content, so it is not subject to regulation under California Code of Regulations, Title 22, Division 4.5. The DTSC regulates the packaging, on-site accumulation, transportation (through standards applicable to transporters of hazardous waste), and disposal of asbestos when it is considered a hazardous waste.

### ***Federal and California Occupational Safety and Health Acts***

The federal and State OSHA regulate asbestos as it relates to employee safety through a set of general notification requirements and corrective actions to reduce potential exposure levels. The federal OSHA Worker Exposure Rule for Asbestos (29 Code of Federal Regulations 1910.1001 and 1926.1101) requires certain actions on the part of any employer whose employees are potentially exposed to asbestos fiber levels above the permissible exposure limit (0.2 fiber per cubic centimeter of air, averaged over an 8-hour day). These actions include corrective measures to reduce exposure levels; notification of employees

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<sup>7</sup> Friable asbestos is asbestos that when dry can be crumbled, pulverized, or reduced to powder by hand pressure.

(including warning signs and labels); controlled access; use of protective equipment; implementation of engineering and housekeeping controls; and employee training programs.

OSHA has established an action level for workplace exposure as well. If an employee could be exposed above the action level, employers must begin compliance activities such as notification, employee training, air monitoring and, in some cases, medical surveillance. In buildings that contain ACMs at levels below OSHA exposure standards, the USEPA still recommends that building owners inform building occupants of the presence and location of ACMs. In addition to these regulations, contractors involved in asbestos surveys and removal are required to be certified by OSHA.

### ***Connelly Act***

The Connelly Act (AB 3713; Health and Safety Code Section 25915 et seq.) establishes notification requirements for all owners and employees working within any pre- 1979 building known to contain ACMs. The notification requirements of the Connelly Act are enforced by Cal/OSHA. There are no buildings on the Project Site.

### ***National Emission Standards for Hazardous Air Pollutants***

The USEPA has established National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 Code of Federal Regulations 61 Part M) that govern the use, removal, and disposal of ACMs as a hazardous air pollutant. NESHAP regulations concern the manufacture, spraying, and fabricating of ACMs, as well as its application, removal, and disposal. NESHAP regulations mandate the removal of friable ACMs before a building is demolished and include notification requirements prior to demolition. The regulations also mandate removal techniques, limit visible emissions of dust to the outside air during removal or renovation, specify disposal procedures, and include provisions governing the packaging and labeling of asbestos wastes. NESHAP regulations are promulgated and enforced by the USEPA. Responsibility for implementing these requirements has been delegated to the State of California, which in turn has delegated the responsibility to the South Coast Air Quality Management District (SCAQMD). The SCAQMD implements NESHAP through its Rule 1403, discussed below.

### ***South Coast Air Quality Management District Rule 1403***

SCAQMD Rule 1403, Asbestos Emissions from Renovation/Demolition Activities, regulates asbestos as a toxic material and controls the emissions of asbestos from demolition and renovation activities by specifying agency notifications, appropriate removal procedures, and handling and clean up procedures. Rule 1403 applies to owners and operators involved in the demolition or renovation of structures with ACMs, asbestos storage facilities, and waste disposal sites. Pursuant to Rule 1403, owners and operators are required to survey structures for ACMs; notify the appropriate agencies of the intent to remove asbestos; follow applicable removal procedures and time schedules; adhere to handling, clean-up, storage, and disposal requirements; and maintain proper records regarding the removal of asbestos. There are no

buildings on the Project Site, but there are underground pipes that may contain asbestos, as described later in this chapter.

### ***Polychlorinated Biphenyls***

Polychlorinated biphenyls (PCBs) can be found in older transformers and other electrical equipment. Due to their hazardous properties, all aspects of PCBs are strictly regulated by the USEPA under TSCA. These regulations ban the manufacture of PCBs, although the continued use of existing PCB-containing equipment is allowed. Transformer oil containing PCBs at a concentration exceeding five parts per million is the California-regulated concentration for hazardous waste, though PCBs in transformer oil at a concentration up to 50 parts per million are currently allowed in transformers in California. TSCA contains provisions controlling the continued use and disposal of existing PCB-containing equipment, as well as the disposal of hazardous waste building materials, and includes life cycle provisions similar to those in RCRA. In addition to TSCA, provisions relating to PCBs are contained in the California Hazardous Waste Control Law, which lists PCBs as hazardous waste. There are no known PCBs on the Project Site.

### ***Oil Wells and Methane Gas***

In compliance with California Public Resources Code Section 3229, Division 3, before commencing any work to abandon any well, the owner or operator shall file with the California State Division of Oil, Gas and Geothermal Resources (DOGGR) a written notice of intention to abandon the well (DOGGR Form OG108). There are no known oil wells on the Project Site.

## **4. ENVIRONMENTAL IMPACTS**

### **Thresholds of Significance**

In order to assist in determining whether a project would have a significant effect on the environment, the City finds a project may be deemed to have a significant impact to hazards and hazardous materials, if it would:

**Threshold IV. HAZ-1:** Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?

**Threshold IV. HAZ-2:** Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment?

**Threshold IV. HAZ-3:** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As discussed in the IS (**Appendix I.1**), criteria (9-c), (9-e), (9-f) and (9-g), would result in no impact or a less than significant impact and therefore are not included in the analysis below.

## 5. METHODOLOGY

Analysis in this section is focused on the use or management of hazardous or potentially hazardous materials resulting from the construction and occupancy and use of the proposed residential units. The severity of potential hazards to people, property, and the environment associated with the heightened interaction with hazardous materials associated with implementation of the proposed Project is also analyzed. This analysis is based on review of information from the Expanded IRAP (see **Appendix IV.H.1**), the RAP Review (see **Appendix IV.H.2**), a Hazards Document Review (see **Appendix IV.H.3**) and the RAP (see **Appendix IV.H.4**) for the Project Site to assess the potential presence of hazardous materials and contamination sources.

Additionally, this section addresses short-term construction impacts resulting from work in the vicinity of pipelines, work in areas with previously documented soil contamination, and other subsurface construction activities, as well as potential impacts associated with the type of uses proposed. In determining the level of significance, the analysis recognizes that all components of the proposed Project would be required to comply with relevant federal and State laws and regulations that are designed to ensure the safety of routine transport, use, management, or disposal of hazardous materials.

## 6. PROJECT IMPACTS

**Threshold IV. HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

The proposed Project would involve site clearing; bioremediation of soils and subsurface materials; demolition of previous facility remnants; construction of new residential buildings; and the installation of open space, utilities, and landscapes. These activities may require the transport of contaminated soil and the use of hazardous substances during construction.

### **Construction**

Construction activities are anticipated to involve the use of typical materials that are potentially hazardous, including vehicle fuels, paints, mastics, solvents, and other acidic or alkaline solutions that would require special handling, transport, and disposal. Additionally, the demolition and removal of facility remnants such as foundations, roads and underground pipes within the Project Site could potentially result in the exposure of hazardous materials such as ACMs and other potentially hazardous materials.

The Phase I Environmental Site Assessment identified the presence of underground piping that may contain asbestos. No other potentially hazardous building materials were identified in remnants of concrete and roads. The pipe will be sampled prior to earthwork activities by a licensed asbestos consultant in accordance with applicable regulations. If any asbestos is confirmed to be present in the piping, the piping will be transported by a licensed hauler in compliance with applicable regulations to a facility licensed to accept asbestos-containing waste material. Any other debris encountered or generated during removal of concrete, roads or other remnants that is suspected to contain hazardous material would be evaluated by a qualified environmental consultant and, if confirmed to contain hazardous material, would be transported in accordance with applicable local, State, and federal regulations to a facility licensed to accept the waste. These measures ensure that no hazardous materials in debris remain on the Project Site after the earthwork activities are completed. Through compliance with applicable local, State and federal regulations, the proposed Project impacts related to the routine transport, use, or disposal of hazardous materials during building demolition would be less than significant.

All materials used during construction would be used and stored in compliance with applicable federal, State, and local regulations. As the use and transport of regulated materials would be limited, in terms of volume and duration, these materials are not considered a significant hazard to the public or environment. The quantity of potential hazardous substances used during construction is very limited and require no special permitting. Additionally, the Lbfd would have the authority to perform inspections and enforce federal and State laws governing the storage, use, transport, and disposal of any regulated materials and wastes.

Furthermore, any unexpected spills or leakages (for example, fuel from a vehicle) that occurs during construction would be required to be remediated in accordance with the State and local regulations for hazardous waste cleanup. Specifically, the construction site would be subject to the regulations in Title 8 of the California Code of Regulations (T8 CCR) that governs workplace safety and which address the handling of hazardous materials in a workplace environment. Additionally, the potential for construction materials to cause contamination off site during storm events would be reduced through the implementation of a stormwater pollution prevention plan (SWPPP), in accordance with NPDES (refer to **Section IV.I: Hydrology and Water Quality**).

Bioremediation and other remedial actions described in the RAP approved by the LARWQCB would be completed prior to construction activities. Contaminated soil will either be addressed by bioremediation to levels approved for residential use (RBCs) or off-site disposal of soil exceeding RBCs that cannot be feasibly bioremediated. The parcel north of Baker that is proposed as open space, not residential use, will be addressed through the removal of soil exceeding RBCs in the top ten feet, emplacement of an engineered cap over the area, and bioventing wells to address deeper contamination.

Soil impacted with TPH and metals may be treated on site, before being hauled off-site for disposal to a licensed landfill upon completion of a waste profile and acceptance by the receiving facility, such as Chiquita Canyon landfill in Castaic. The potential for health risk associated with diesel emissions of haul trucks, and other construction equipment, is discussed in **Section IV.B: Air Quality**. On site treatment would be conducted by mean of a transportable treatment unit (TTU), which is a state of the art computerized, fully automated system consisting of a high-speed screening plant, automated continuous mixing plant with a fully enclosed twin shaft mixing chamber, self-erecting reagent silo, secondary upright reagent silo, office control module, and all required conveyor systems. The TTU would be operated under the oversight of a licensed environmental geologist or engineer. The TTU is permitted by the state's Department of Toxic Substance Control (DTSC) for use in California. The TTU treats the soluble hazardous waste metals to below hazardous levels. Confirmation sampling of treated soil is used to confirm successful treatment of hazardous soluble heavy metals to non-hazardous concentrations. Waste classification will be conducted in accordance with 22 CCR Division 4.5, Chapter 11, Article 3 and 40 CFR 261 Subpart C. The on-site TPH impacted soil may meet the criteria for use as daily cover. Trucks loaded with soil for disposal will enter the shaker plates to remove excess soil from the tires and under-carriage of the truck. Each truck leaving the Site will carry a completed waste manifest. Trucks will follow the designated hauling route as required by the City of Long Beach (see **Appendix IV.H.4**). All applicable regulations would be followed to minimize adverse exposure of contaminated soil to the public.

Based on the identification of the existing conditions at the Project Site described previously, as well as the use of regulated substances during construction of the Project, there is the potential for an adverse impact to the environment and other sensitive receptors through the routine transport, use, or disposal of hazardous materials. However, during Project construction, all activities that relate to existing on-site environmental conditions would be subject to applicable local, State, and federal regulations relating to the routine transport, use, and disposal of hazards and hazardous materials which appropriately address all of the environmental conditions that are present at the Project Site. Through required compliance with these regulatory compliance measures, the Project would not result in adverse impacts related to the routine transport, use, and disposal of hazards and hazardous materials during construction and impacts would be less than significant.

### ***Operation***

Operation and maintenance of the proposed residential Project would not involve the routine transport, use, or disposal of hazardous materials except in de minimis quantities used by households. Further, the types and amounts of materials that would be used in connection with the proposed Project would be typical of those used in residential neighborhoods and neighborhood uses, such as surface and floor cleaning products utilized for routine janitorial cleaning procedures. All potentially hazardous materials to be used during construction and operation of the Project would be contained, stored, and used in

accordance with manufacturers' instructions and handled in accordance with all applicable standards and regulations, including but not limited to, those set forth by the federal and State Occupational Safety and Health Acts. Any associated risk would be adequately reduced to a less than significant level through implementation and compliance with these existing laws and regulations. Operational impacts through the routine transport, use, or disposal of hazardous materials would be less than significant and no mitigation measure is required.

**Threshold IV. HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.**

### ***Construction***

Construction of the proposed Project would involve the temporary use of hazardous materials including vehicle fuels, oils, and transmission fluids. Such use which could pose risks to construction workers or lead to environmental contamination, if not properly stored, used, or disposed. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short term or one time in nature. Project construction workers would be trained in safe handling and hazardous materials use.

Additionally, the use, storage, transport, and disposal of construction-related hazardous materials and waste would be required to conform to existing laws and regulations. These include the Hazardous Material Transportation Act, the Resource Conservation and Recovery Act, the California Hazardous Waste Control Act, CUPA, and the California Accidental Release Prevention Program. As required by law, notification to Underground Service Alert would be made. Prior to construction an attempt to coordinate with the owners/operators of any high priority underground lines within the Project Site would be made in order to avoid damage to high-pressure pipelines and natural gas/petroleum pipelines in the area. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts to occur. For example, if a spill or leakage of petroleum products occurs during construction activities, it would be immediately contained, the hazardous material identified, and the impacted area would be remediated in compliance with applicable State and local regulations for the cleanup and disposal of that contaminant.

The RAP and the expanded IRAP documented existing pollutants on and beneath the surface of the Project Site and developed appropriate remediation actions to be completed to meet the defined clean-up goals which would be implemented prior to construction, with the oversight and approval of LARWQCB (see **Appendix IV.H.1** and **Appendix IV.H.4**). In addition to removal of the top ten feet of soil, an Engineered Cap will be placed over the portion of the Project Site north of Baker Street to be maintained as open

space. The Engineered Cap would eliminate the exposure pathway of COCs that remain on-site and reduce the likelihood that contaminants remaining on site would affect groundwater quality. Ongoing bioremediation will treat TPH-contaminated soil on the parcel south of Baker Street to thresholds that are acceptable for residential use. Soil containing contaminants that exceed the RBCs that cannot be feasibly bioremediated will be transported to an off-site disposal facility. Treated soils approved for reuse or imported in accordance with the standards in the RAP will be incorporated into Project grading (see **Appendix IV.H.4**). Verification sampling of all treated and imported soil prior to placement as engineered-compacted fill as required by the RAP will ensure conformance with the approved RBCs for the Project.

The existing on-site bioremediation activities would continue during the initial phases of Project construction pursuant to the current order by the City and the LARWQCB. The LARWQCB will issue Waste Discharge Requirements (WDRs), if needed, for on-site reuse of the treated TPH impacted soil. The bioremediation would be accelerated to achieve the defined RBCs in soil by adding nutrients and/or composting material to enhance microbial degradation. The maximum removal depths for the TPH-contaminated would be dictated by the requirements of the geotechnical engineer, thus could vary slightly from the depths estimated in the RAP.

Following completion of bioremediation, all soil verified as meeting the treatment criteria (RBCs) would be reused as fill soil at the Site. Remediation of VOCs associated with the Tesoro pipeline leaks beneath the eastern portion of the Project Site would continue to be implemented via vapor extraction in accordance with the proposed expanded IRAP with LARWQCB and City oversight until the agencies concur that no further remediation is needed. The potential for vapor intrusion from methane and VOCs beneath the Project Site will be further reduced through the installation of an engineered sub-slab vapor intrusion mitigation system beneath all residential structures. The proposed vapor mitigation plans will be submitted to the City of Long Beach and the LARWQCB for review and approval prior to construction of the proposed residential buildings.

Confirmation sampling is an important component of the RAP to ensure the treated soil and any imported soil meets the Site-specific treatment criteria. The soil sampling requirements would include testing the bioremediated soil, testing of any soil imported to the Site and post-grading confirmation sampling to verify conformance with the approved RBCs for the Project.

An Operations and Implementation Plan (OMIP) for the engineering (vapor mitigation) controls would require the future homeowners' association to manage the vapor mitigation system maintenance. A recorded Land Use Covenant imposed by LAWQCB for the Project is expected to include restriction of pumping and use of groundwater; future access requirements associated with Tesoro's operation of its soil vapor extraction system; any required groundwater monitoring activities; limitations on future excavation activities; and a requirement for vapor mitigation systems beneath all occupied structures.

Accordingly, implementation of ongoing bioremediation activities as identified in the RAP prior to Project approval and compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are addressed in an appropriate manner to minimize potential impacts associated with upset or accident conditions. Potential impacts regarding hazardous waste upset or accident conditions would be less than significant.

***Operation***

Occupancy and use of the residential units would not create a significant hazard to the public or the environment and would not emit hazardous emissions. Routine maintenance and upkeep of the residential development would involve handling of small quantities of hazardous materials for activities including cleaning and local upgrades. However, as discussed under **Threshold IV.HAZ-1**, handling of such materials is addressed by compliance with the manufacturer’s instructions and proper storage when not in use. Therefore, potential impacts associated with upset or accident conditions would be less than significant.

**Threshold IV. HAZ-3: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment.**

California Government Code Section 65962.5 references the following types of hazardous materials sites: hazardous waste facilities; hazardous waste discharges for which the State Water Quality Control Board has issued certain types of orders; public drinking water wells containing detectable levels of organic contaminants; underground storage tanks with reported unauthorized releases; and solid waste disposal facilities from which hazardous waste has migrated. While Section 65962.5 makes reference to the preparation of a list, many changes have occurred related to web-based information access since 1992 and information regarding the Cortese List is now compiled on the websites of the DTSC, the State Water Resources Control Board, and CalEPA. The DTSC maintains the EnviroStor database, which includes sites on the Cortese List and also identifies potentially hazardous sites where cleanup actions or extensive investigations are planned or have occurred. The database provides a listing of federal Superfund sites, State response sites, voluntary cleanup sites, and school cleanup sites.

The EnviroStor database is maintained by DTSC and provides access to detailed information on hazardous waste permitted sites and corrective action facilities, as well as existing site cleanup information. EnviroStor also provides information on investigation, cleanup, permitting, and/or corrective actions that are planned, being conducted, or have been completed under DTSC’s oversight. The RWQCB maintains the GeoTracker database which manages sites that impact, or have the potential to impact, water quality in California. The GeoTracker database includes sites that require cleanup, are under current investigation/remediation, or have been closed with a status not requiring further investigation.

The Project Site is identified in two listings.<sup>8,9</sup> The Project Site used to operate as a water treatment facility for treating produced water recovered during oil well production. This operation continued from 1926 to 1998. During this time, the land was owned by OOI. Because of the presence of hazardous materials during the water treatment operation, an evaluation of the Site and the subsequent remediation effort was initiated in the 1980s. In 1996 a Preliminary Assessment (Re-assessment) was completed under a U.S. EPA grant. That assessment did not result in further requirements under the Comprehensive Environmental Response, Compensation, and Liability Act. The City has overseen Site remedial efforts in coordination with RWQCB, which has cited California Water Code section 13267 as authority for its oversight of soil and groundwater remedial work.

As discussed under Threshold IV.HAZ-2, the RAP identifies recommendations that would be implemented on the Project Site prior to approval of the Project to allow for construction of the residential development (see **Appendix IV.H.4**). Recommendations include placement of an Engineered Cap over the contaminated soil north of Baker Street for use as open space or a park and the clean-up of the South parcel to allow for construction. The Engineered Cap would eliminate exposure to COCs that remain on site. Groundwater sampling data indicates there would be little to no chance COCs on site would affect groundwater quality beneath the parcel North of Baker Street with implementation of the Engineered Cap. Remediation work on the Project Site south of Baker street, would continue to conduct on-site bioremediation in accordance with a LARWQCB approved RAP prior to construction. If off-site disposal of contaminated soils is needed, all local, State, and federal regulations regarding the removal and transport of contaminated soils would be implemented. Additionally, any noncontaminated soils used in cleanup efforts on the Project Site can be generated on site or imported as identified in the RAP (see **Appendix IV.H.4**). With approval of the RAP by the RWQCB and implementation prior construction of the residential development, potential hazards to the public or environment would be less than significant.

## **7. CUMULATIVE IMPACTS**

Hazards and hazardous materials can contribute to cumulative impacts if the Project were to contribute to the release of hazardous materials into the environment during transportation and handling or through contaminated groundwater which can affect downgradient properties. As previously discussed, the presence of contaminated soil and groundwater on-site would be reduced to a less than significant through the completion of ongoing bioremediation efforts. Additionally, any transport or handling of hazardous waste materials would comply with all federal and State requirements to minimize and reduce the exposure of the public to adverse hazardous impacts. Air quality impacts of the transport of soil and

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8 DTSC, EnviroStor, [https://www.envirostor.dtsc.ca.gov/public/profile\\_report?global\\_id=19290011](https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=19290011), accessed April 27, 2021.

9 State Water Resources Control Board, GeoTracker, [https://geotracker.waterboards.ca.gov/profile\\_report?global\\_id=SL2044M1596](https://geotracker.waterboards.ca.gov/profile_report?global_id=SL2044M1596), accessed April 27, 2021.

other construction equipment is discussed in **Section IV.B: Air Quality**. Based on this information, the proposed Project would not contribute to cumulative impacts of hazardous material.

In addition, no related projects are proposed or located adjacent or near to the Project Site. All future projects involving hazardous waste materials or contaminated sites would be required to conduct technical studies and implement remediation action plans and mitigation measures in order to minimize any adverse impacts to the public. Future projects would also be required to comply with all federal and State requirements in handling hazardous waste materials which would further reduce any potential adverse impacts to the public. Such requirements would minimize adverse effects anticipated from future projects.

Operation of any related projects involving the use of potentially hazardous materials typical of those used in commercial and residential developments, including cleaning agents, paints, pesticides, and other materials used for landscaping. However, all future development located within the vicinity of the Project Site would be subject to the same local, State, and federal regulations described above with regard to hazards and hazardous materials. Accordingly, any risks associated with these materials would be adequately reduced to less than significant through compliance with these standards and regulations.

Impacts related to all environmental conditions that may be encountered during construction of the proposed Project would be reduced to less than significant through the implementation of the RAP as approved by the LARWQCB prior to construction and compliance with local, State, and federal regulations. As previously discussed, the proposed Project would result in less than significant hazard or hazardous materials impacts and each related project would be required to comply with the local, State, and federal laws and regulations. For these reasons, cumulative hazards and hazardous waste impacts would be less than significant.

## **8. MITIGATION MEASURES**

With appropriate adherence to regulatory compliance measures including implementation of a RAP approved by the LARWQCB, no mitigation measures are required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed Project impacts, and contribution to potential cumulative hazardous waste impacts, would be less than significant.

## IV.I HYDROLOGY AND WATER QUALITY

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### 1. INTRODUCTION

This section provides an analysis of the potential impacts to hydrology, water quality, and groundwater impacts of the proposed Project. This analysis is based on the Preliminary Drainage Report prepared for the Project by KHR Associates (see **Appendix IV.I.1: Preliminary Drainage Report**), dated April 22, 2020; the Conceptual LID BMP Calculations, prepared for the Project by KHR Associates (see **Appendix IV.I.2: Conceptual LID BMP Calculations**), dated April 22, 2020; the Supplemental Assessment for Origin of LNAPL Impacts Near BRYCON MW1 prepared by California Environmental (see **Appendix IV.I.3: Supplemental Assessment for Origin of LNAPL Impacts**), dated July 2019; the Expanded Interim Remedial Action Installation and Startup Report was prepared by AECOM Technical Services, Inc. for Tesoro SoCal Pipeline Company LLC and Tesoro Refining & Marketing Company LLC (Tesoro)(see **Appendix IV.H.1: Expanded Interim Remedial Action Plan**); the Document Review – Remedial Action Plan Proposed River Park Residential Development prepared by Converse Consultants (see **Appendix IV.H.2: Document Review – Remedial Action Plan**), dated May 21, 2020; and the Remedial Action Plan (RAP) prepared by California Environmental for Integral Partners for the Oil Operators Inc. (OOI) property (see **Appendix IV.H.4: Draft Remedial Action Plan**), dated August, 2021.

### 2. ENVIRONMENTAL SETTING

#### *Existing Conditions*

##### **Regional**

##### ***Surface Water Hydrology***

The Project Site is located within the Los Angeles-San Gabriel Hydrologic Unit, which covers the majority of Los Angeles County and drains an area of approximately 1,600 square miles. The major drainage systems in this area include the Los Angeles River, San Gabriel River, and Ballona Creek. The San Gabriel River is located southeast of the Project Site, and both the Los Angeles River and San Gabriel River run in a general north-south direction into the Pacific Ocean. The Project Site is located within the San Gabriel Watershed, which is bounded by the San Gabriel Mountains to the north, most of San Bernardino and Orange Counties to the east, the division of the Los Angeles River from the San Gabriel River to the west, and the Pacific Ocean to the south. The San Gabriel Watershed drains into the San Gabriel River from the San Gabriel Mountains and flows south until its confluence with the Pacific Ocean. The San Gabriel Watershed covers approximately 640 square miles and encompasses 35 cities. The land uses within the San Gabriel Watershed are approximately 26 percent residential, 15 percent commercial, 50 percent rural, and 9

percent categorized as other.<sup>1</sup> The primary surface water bodies in the Project vicinity are Alamitos Bay, the San Gabriel River, Los Cerritos Channel, Los Cerritos Wetlands, and the Pacific Ocean. Several of these surface water bodies have been engineered and dredged substantially; however, portions of them are included in the U.S. Fish and Wildlife Service National Wetlands Inventory.

### ***Surface Water Quality***

As discussed above, the Project Site is located within the San Gabriel Watershed, and the Project Site ultimately drains to Alamitos Bay via a network of City storm drains. Water quality in the watershed is affected by urban uses and activities, including automobiles, landscaping practices, industrial activities, construction, non-stormwater connections to the drainage system, and accidental spills.

### **Beneficial Uses of the San Gabriel Watershed**

According to the Basin Plan, almost every defined beneficial use is identified in water bodies within the San Gabriel Watershed.<sup>2</sup> Specifically, 20 beneficial uses for surface waters and three beneficial uses for groundwaters in the San Gabriel Watershed are designated in the Basin Plan. The existing and potential beneficial uses for the waters within the San Gabriel Watershed include municipal and domestic supply; navigation; water contact and non-contact water recreation; commercial and sport fishing; warm freshwater habitat; estuarine habitat; wetland habitat; marine habitat; wildlife habitat; rare, threatened, or endangered species habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and shellfish harvesting. In addition, existing and potential beneficial uses for Alamitos Bay, where surface water flows from the Project Site ultimately discharge, include water contact recreation and non-contact water recreation.

### **Impairments and TMDLs in the San Gabriel Watershed**

Pursuant to Section 303(d) of the federal Clean Water Act (CWA), the California State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB)s identify impaired bodies of water that do not meet water quality standards and prioritize and schedule them for development of total maximum daily loads (TMDLs). A TMDL specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Collectively, those facilities and activities that discharge into the water body must not exceed the TMDL. The United States Environmental

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1 Los Angeles County Department of Public Works, San Gabriel River Watershed, <http://ladpw.org/wmd/watershed/sg/>, accessed March 2021.

2 Los Angeles Regional Water Quality Control Board, Basin Plan for the Coastal Watersheds of Los Angeles, and Ventura Counties, [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/basin\\_plan/basin\\_plan\\_documentation.html](https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html), accessed March 2021.

Protection Agency (USEPA) approved the most recent Section 303(d) list (dated 2018) in January 2021.<sup>3</sup> The 2018 303(d) list did not indicate impairment to any water bodies surrounding the Project Site.

### **Groundwater Hydrology**

Groundwater use for domestic water supply is a major beneficial use of groundwater basins in Los Angeles County. The coastal portion of the City overlies the Coastal Plain of Los Angeles Groundwater Basin, West Coast Subbasin. Groundwater flow in the Coastal Plain is generally south-southwesterly and may be restricted by natural geological features. Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins, as well as injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water.

### **Drainage**

The City of Long Beach is included in both the Long Beach Nearshore Watershed Management Program as well as the Lower Los Angeles River Watershed Management Program. The Nearshore Watershed includes the sub-drainage areas of the Dominguez Channel Estuary, the Port of Long Beach, Long Beach City Beaches, Colorado Lagoon, Alamitos Bay, San Gabriel River Estuary and the El Dorado Lakes.<sup>4</sup> The Nearshore watersheds discharge to the Long Beach Harbor, the San Pedro Bay (including the Long Beach City Beaches), and the Estuaries of the Dominguez Channel, Los Cerritos Channel, and San Gabriel River.

- The Dominguez Channel Estuary subwatershed has a total drainage of approximately 0.69 square miles that flows directly to the Los Angeles/Long Beach Harbors.
- The Port of Long Beach subwatershed has a total drainage of approximately 4.54 square miles that drains directly to the Los Angeles/Long Beach Harbor.
- The Long Beach City Beaches subwatershed has a total area of approximately 0.59 square miles that discharges to San Pedro Bay.
- The Alamitos Bay subwatershed has a total drainage area of approximately 5.7 square miles. This area includes Sims Pond which is situated north of Alamitos Bay near the intersection of Pacific Coast Highway and Loynes Drive. The Colorado Lagoon subwatershed is approximately 1.8 square miles. Alamitos Bay and Colorado Lagoon are hydraulically connected via an underground culvert which connects Colorado Lagoon to the Marine Stadium portion of Alamitos Bay. The Los Cerritos Channel

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3 State Water Resources Control Board, 2018 Integrated Report, [https://www.waterboards.ca.gov/water\\_issues/programs/tmdl/2018state\\_ir\\_reports\\_final/102020\\_6\\_final\\_stffrpt.pdf](https://www.waterboards.ca.gov/water_issues/programs/tmdl/2018state_ir_reports_final/102020_6_final_stffrpt.pdf) , accessed March 2021.

4 City of Long Beach, Stormwater Management, Long Beach Nearshore Watershed Management Program, [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/watershed\\_management/Long\\_Beach/20160127/LBWMP\\_final.pdf](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/Long_Beach/20160127/LBWMP_final.pdf), accessed March 2021.

Estuary is approximately 1.5 miles long and extends from just south of Atherton St. to the Alamitos Bay.

- The San Gabriel River Estuary has a total drainage area of 0.77 square miles.

The Lower Los Angeles River Watershed includes the sub-drainage areas of Compton Creek, Rio Hondo, and the Lower LAR.

- The Compton Creek subwatershed drains approximately 42 square miles to its confluence with the Los Angeles River. The subwatershed is almost entirely developed.
- The Rio Hondo subwatershed drains approximately 143 square miles to its confluence with the Los Angeles River.
- The Lower LAR Watershed drains runoff directly from urbanized area totaling approximately 43.7 square miles. From its upstream beginning in South Gate to its downstream confluence with the Los Angeles River Estuary, the Lower LAR stretches approximately 13.3 miles.

The watershed is predominantly served by storm sewer systems, across ten agency jurisdictions, connecting drainage in urbanized areas with the main tributaries. Due to the narrow shape of the watershed, the participating agencies are directly adjacent to either the Lower LAR or its main tributaries Compton Creek and the Rio Hondo.

### **Stormwater**

The Nearshore Watersheds encompass 16.8 square miles (10,738 acres), 4.8 square miles (3,058 acres) of which are under the Port's jurisdiction.<sup>5</sup> Average annual precipitation for the watershed area is highly variable and terrain-dependent, averaging fifteen (15) inches annually and mainly occurring during the winter months (November through April). Due to the atmospheric dominance of the stable marine layer, significant precipitation is rare between May and October. During the winter months Pacific storms often push cold fronts across California from northwest to southeast. These storms and frontal systems account for the vast bulk of the area's annual rainfall. Such rainy season storms are migratory, with wet and dry periods alternating during the winter and early spring with irregularity in timing and duration. Rainfall patterns average 3.68 inches of rainfall in February to 0.01 inches of rainfall in July. The highly developed conditions within the watershed facilitates most stormwater flows generated by the rainfall to be routed through curbs, gutters, catch basins, and storm drains to the subwatersheds, and eventually to the Pacific Ocean.

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5 Long Beach Nearshore Watershed Management Program, [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/watershed\\_management/Long\\_Beach/20160127/LBWMP\\_final.pdf](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/Long_Beach/20160127/LBWMP_final.pdf), accessed March 2021.

## Local

### ***Surface Water Quality***

In general, urban stormwater runoff occurs during and shortly following precipitation events. The volume of water ultimately directed into the drainage system depends on such things as the intensity and duration of the rainstorm and soil moisture. In addition to sediment, contaminants that may be found in stormwater from developed areas include trash, bacteria, metals, nutrients, and potentially, organics and pesticides. The source of contaminants is diffuse and includes all areas where precipitation falls, as well as the air it falls through. Therefore, contaminants on roads, maintenance areas, parking lots, and building tops, which are not usually contained in dry weather discharges, may be carried with rainfall drainage into the drainage system. The City conducts routine street cleaning operations as well as periodic cleaning and maintenance of catch basins to reduce stormwater pollution within the City.

On June 30, 1999, the Regional Water Quality Control Board issued a municipal storm water NPDES permit to the City of Long Beach. The City of Long Beach became the first city in Los Angeles County to receive its own NPDES Permit and is required to conduct a water quality monitoring program for stormwater and dry weather discharges in the City's municipal separate storm sewer systems (MS4s).<sup>6</sup> Under the terms of Order No. 99-060, the City of Long Beach was required to conduct a water quality monitoring program for stormwater and dry weather discharges through the City's municipal separate storm sewer system (MS4) beginning in the 1999/2000 wet weather season. The permit was initially issued for the term of five years. At the end of the initial five years, the City was directed by the Regional Water Quality Control Board to continue operating under the 1999 permit until further notice. Recently, the City of Long Beach has participated in development of Watershed Management Programs (WMPs) and Coordinated Integrated Monitoring Programs (CIMPs) for three separate watershed management groups under the LA County MS4 Permit (Order R4-2012-0175) and the City of Long Beach new MS4 Permit (Order No. R4-2014-0024). The new permits will guide monitoring efforts for the remaining watersheds within the City of Long Beach.

### ***Groundwater Hydrology***

As noted above, the Project Site overlies the West Coast Subbasin within the Coastal Plain of Los Angeles Groundwater Basin. The West Coast Subbasin underlies 160 square miles in the southwestern part of Los Angeles County.<sup>7</sup> The Subbasin extends southwesterly along the coast from the Newport-Inglewood fault

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6 City of Long Beach, Stormwater and Environmental Compliance Division, <https://longbeach.gov/pw/resources/stormwater-management/>, accessed July 2021.

7 West Basin Municipal Water District, Groundwater, <https://www.westbasin.org/water-supplies/groundwater/west-coast-groundwater-basin/>, accessed March 2021.

zone to Santa Monica Bay and provides groundwater to 11 cities and unincorporated areas of Los Angeles County. Discharge of groundwater from the Subbasin occurs primarily by pumping.

### **Drainage**

The Project Site overlies the West Coast Subbasin within the Coastal Plain of the Los Angeles Groundwater Basin. The West Coast Subbasin extends southwesterly along the coast from the Newport-Inglewood fault zone to Santa Monica Bay and provides groundwater for 11 cities and unincorporated areas of Los Angeles County. The watershed is predominately served by storm drain systems, extending throughout the City of Long Beach, connecting drainage in urbanized areas with the main tributaries.<sup>8</sup>

### **Stormwater**

Dry weather flow in the Nearshore Watershed comes predominantly from non-stormwater discharges and groundwater inflow.<sup>9</sup> Sources of non-stormwater discharges include generating stations, urban runoff such as irrigation overflows and car wash water, and various industrial discharges.

Long Beach City Beaches are located along the San Pedro Bay, between the LA River Estuary and the San Gabriel River Estuary. This area includes the Shoreline Marina. There are five storm drain basins that collect, convey and discharge runoff to the Long Beach City Beaches, and are situated 100-200 feet above the water's edge. Direct drainage area to the Long Beach City Beaches is approximately 505 acres.

The Los Angeles River WMA is one of the largest in the region and is also one of the most diverse in terms of land use patterns.<sup>10</sup> Approximately 324 square miles of the watershed are covered by forest or open space land including the area near the headwaters, which originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The remainder of the watershed is highly developed. The river flows through the San Fernando Valley past heavily developed residential and commercial areas. From the confluence with the Arroyo Seco, north of downtown Los Angeles, to the confluence with the Rio Hondo, the river flows through industrial and commercial areas and is bordered by rail yards, freeways, and major commercial and government buildings. From the Rio Hondo to the Pacific Ocean, the river flows through industrial, residential, and commercial areas, including major refineries and petroleum products storage

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8 Long Beach Nearshore Watershed Management Program, [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/watershed\\_management/Long\\_Beach/20160127/LBWMP\\_final.pdf](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/Long_Beach/20160127/LBWMP_final.pdf), accessed March 2021.

9 Long Beach Nearshore Watershed Management Program, [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/watershed\\_management/Long\\_Beach/20160127/LBWMP\\_final.pdf](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/Long_Beach/20160127/LBWMP_final.pdf), accessed March 2021.

10 Los Angeles Regional Water Quality Control Board, Lower Los Angeles River Watershed Management Program, [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/stormwater/municipal/watershed\\_management/los\\_angeles/lower\\_losangeles/LLARWMP2017updated.pdf](https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/los_angeles/lower_losangeles/LLARWMP2017updated.pdf), accessed March 2021.

facilities, major freeways, rail lines, and rail yards serving the Ports of Los Angeles and Long Beach. Due to major flood events at the beginning of the century, by the 1950s most of the Los Angeles River was lined with concrete. The Los Angeles River tidal prism/estuary begins in Long Beach at Willow Street and runs approximately three miles before joining with Queensway Bay. The channel has a soft bottom in this reach with concrete-lined or riprap sides.

## **Project Site**

### ***Surface Water Hydrology***

The Project Site is located within the Los Angeles River Watershed. This watershed is 834 square miles beginning in the Santa Monica, Santa Susana, and San Gabriel Mountains, and discharging into the Pacific Ocean via San Pedro Bay near Long Beach.

The highest elevation on- Site is approximately 52.96 feet near the northeast corner of the Site and the lowest elevation is approximately 29.69 feet at the westerly boundary of the Site within Baker Street. The higher elevations tend to be along the easterly boundary of the Site and the lower elevations tend to be along the westerly boundary of the Site. Within the center of the Site are large basins that were previously used as part of a water treatment process for produced water and other fluids recovered during oil production. Currently, most of the Site flows into these basins. A portion of Golden Avenue and Baker Street drains into the Site.<sup>11</sup>

### ***Surface Water Quality***

In addition to existing catch basins within the Project Site, there are a range of non-structural BMPs and environmental water quality practices. These include general housekeeping practices such as regular trash collection and street sweeping; proper storage of hazardous materials and wastes; and substituting environmentally friendly products for environmentally hazardous products, such as soaps, solvents, and pesticides. In addition, stormwater runoff would be collected by private on-site catch basins that drain to the respective biofiltration planters within each area to be treated. Filtered and high flows are directed from the biofiltration planters to a private storm drain network, which connects to a City of Long Beach storm drain.

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<sup>11</sup> Preliminary Drainage Study, Appendix IV.1.1, April 22, 2020.

### **Groundwater Hydrology**

According to the Geohazards Report prepared for the Project by Converse Consultants, historical high groundwater at the Project Site is approximately 20 below ground surface (bgs).<sup>12</sup> Groundwater is not expected to be encountered during grading and construction of the proposed Project. In general, groundwater levels fluctuate with the seasons and local zones of perched groundwater may be present within the near-surface deposits due to local conditions or during rainy seasons. Groundwater conditions below the Site may vary depending on numerous factors including seasonal rainfall, local irrigation, stormwater recharge, pumping activities for sea water intrusion barriers, groundwater recharge and pumping, among other factors. The regional groundwater table is not expected to be encountered during the planned construction.

### **Existing Groundwater Quality**

In August 2019, a RAP was prepared by California Environmental for Integral Partners for the OOI property (see **Appendix IV.H.4**). The plan was submitted to the Los Angeles Regional Water Quality Board for review. The purpose of the RAP is to identify methods for completion of remediation activities that lead to the issuance of a No Further Action determination by the lead enforcement agencies (City of Long Beach and Los Angeles Regional Water Quality Control Board (LARWQCB)).

Converse Consultants reviewed the RAP prepared by California Environmental on behalf of the City of Long Beach to provide an independent third-party review of the procedures and recommendations presented in the RAP (see **Appendix IV.H.2**). Based on this evaluation, no chemicals of concern (COCs) were identified in the groundwater based on the quarterly groundwater monitoring showing that the OOI Site COCs (TPH-o<sup>13</sup> and lead) have not significantly impacted the groundwater quality beneath the Site. COCs and their thresholds are explained further on within this section. Groundwater beneath the eastern portion of the Site is contaminated with TPH-g<sup>14</sup> and VOCs that reportedly have migrated on site from off-site pipeline releases. Accumulations of gasoline product (LNAPL) were periodically found in monitoring well Brycon MW1 from 2013-2019 (**Appendix IV.I.3**). Arsenic was found present in groundwater at concentrations up to 0.711 mg/L. This is greater than the maximum contaminant level (MCL) of 0.01 mg/L. The concentrations of arsenic in the groundwater are reportedly correlated with the TPHg plume in groundwater. The TPHg plume exists in six of the fourteen monitoring wells located on the eastern half of

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12 Converse Consultants, Geohazards Report, Proposed River Park Residential Development, City of Long Beach, California, June 17, 2020, Appendix IV.F.1.

13 "TPH" is the abbreviation for total petroleum hydrocarbons which is a term used to describe a large family of several hundred chemical compounds that originate from crude oil; TPH-o referred here, mentions specific TPH chemicals within the oil range.

14 TPH-g refers to specific TPH chemicals within the gasoline range.

the property and have been stable or shrinking in concentration. The six (6) wells with TPHg are located within the eastern half of the property and contain the following TPH concentrations; ESE-MW1 0.4 mg/l, Brycon-MW1 100.0 mg/l, Brycon – MW2 0.28 mg/l, Brycon – MW3 13.0 mg/l, Brycon –MW4 0.48 mg/l, and TMW5 9.8 mg/l. The RAP stated that arsenic in sediment can dissolve into groundwater under low dissolved oxygen (anoxic) conditions associated with hydrocarbon (TPH) plumes. The low concentrations of dissolved oxygen in combination with other geochemical processes promoted the solubility of the stable form of arsenic raising the concentration of arsenic dissolved in groundwater. This is similar to the concentrations of TPH found in the monitoring wells. The reabsorption of arsenic onto the aquifer sediment is occurring on the west portion of the Site where low to non-detect concentrations of arsenic are found in groundwater. **Table IV.I-1** shows the site-specific risk-based remediation goals (RBGs) for the TPH contaminated soil within the Project Site based on evaluation of Human Health Risk Assessment (HHRA) dated January 14, 2016 found in **Appendix IV.H.4**. The HHRA was prepared in order to (1) evaluate the potential health risks to human receptors posed by concentrations of constituents detected at least one time in the soil matrix, soil vapor, and shallow groundwater underlying the monitoring site and (2) to determine risk-based cleanup goals and/or mitigation measures protective of human health. EPA defined Maximum Contaminant Levels (MCLs) for drinking water are shown in **Table IV.I-2**. These RBGs were reviewed and agreed to by Dr. James Carlisle of the CalEPA Office of Environmental Human Health Hazard Assessment (OEHHA).

Additionally, an Expanded Interim Remedial Action Report was prepared for the Tesoro SoCal Pipeline Company LLC and Tesoro Refining & Marketing Company LLC (Tesoro) to document the soil vapor extraction (SVE) system expansion on the Project Site (see **Appendix IV.H.1**). In 2014, as required by the LARWQCB Clean-up and Abatement Order (CAO) R4-2013-0064, Tesoro would effectively implement the investigation, monitoring, cleanup, and abatement of the effects of waste allegedly discharged from pipelines located beneath the Golden Avenue Site. The monitoring Site is partially located upon and adjacent to a 20-acre portion of a former oil field and refinery waste treatment and oil recovery facility that operated from 1926 until at least 1998 by Oil Operators, Inc. (OOI). Although OOI's operations and/or other pipelines are likely sources of benzene, unrefined product, and refined product along the eastern boundary of the OOI site, Tesoro is listed as the sole responsible party in the Order.

The SVE network consists of ten wells: the OOI SVE well called VES-A, four wells installed in 2017, and five additional wells that allow for focused remediation within each zone. The SVE well network was expanded to include an additional nine SVE wells, and a thermal oxidizer to support a higher treatment capacity was installed to replace the previous system's catalytic oxidizer. The expanded SVE system was placed into operation on February 18, 2020.

**Table IV.I-1  
Site-Specific RBGs for Soil**

TPH Based on Carbon Range	Remediation Goal	Location
$C_4-C_{12}$	< 370 mg/Kg	Upper 0-10 ft
$C_{13}-C_{22}$	< 5,500 mg/Kg	Upper 0-10 ft
$C_{23}-C_{32}$	< 5,000 mg/Kg	Upper 0-10 ft
$C_{32}-C_{40}$	< 6,500 mg/Kg	Upper 0-10 ft

Source: California Environmental, Remedial Action Plan (RAP), Appendix IV.H.4.

**Table IV.I-2  
MCL for Drinking Water**

Contaminants of Concern (COC)	MCL
Lead	0.015 mg/L
Arsenic	0.010 mg/L

Source: EPA, National Primary Drinking Water Regulations, <https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations#seven>, accessed May 2021.

### **Drainage**

The proposed Project site does not currently have a functional drainage system in place. As previously stated, the highest elevation on site is approximately 52.96 feet near the northeast corner of the Project Site and the lowest elevation is approximately 29.69 feet at the westerly boundary of the Project Site within Baker Street. The higher elevations tend to be along the easterly boundary of the Site and the lower elevations tend to be along the westerly boundary of the Site. Within the center of the Site are large basins which are remnants from the former water treatment facility. The resulting drainage pattern on site involves most of the Project Site flows into one of these basins due to their lower elevation when compared to the rest of the site. A portion of Golden Avenue and Baker Street also drains into the Site.<sup>15</sup> In its current state, the site lacks engineered drainage features that would collect, slow, and treat the flow of stormwater.

<sup>15</sup> Preliminary Drainage Study, Appendix IV.I.1, April 22, 2020.

### **3. REGULATORY SETTING**

#### ***Federal***

##### **Clean Water Act**

The CWA of 1972 was enacted to restore and maintain the chemical, physical, and biological integrity of the Nation's waters by regulating the discharge of pollutants to waters of the US from point sources for the propagation of fish and wildlife. Section 208 of the CWA and the requirements of the Code of Federal Regulations require local water management plans. Preparation of these water management plans is delegated to individual states by the USEPA, which is charged with implementing the CWA.

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States regulated under this program include fill for development and mining Projects. Waters of the United States are defined in US Army Corps of Engineers (USACE) regulations stating that navigable waters are those that are navigable in the traditional sense and includes adjacent wetlands and tributaries to navigable waters of the US and other waters, the degradation or destruction of which could affect interstate or foreign commerce. Proposed activities are regulated through a permit process, reviewed by the USACE, who evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines, regulations promulgated by the USEPA.

##### **Federal Anti-Degradation Policy**

The federal Anti-Degradation Policy requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations (CFR), state anti-degradation policies and implementation methods must, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource. State permitting actions must be consistent with the federal Anti-Degradation Policy.

#### ***State***

##### **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (embodied in the California Water Code) established the principal California legal and regulatory framework for water quality control. The Porter-Cologne Water Quality Control Act includes provisions to address the requirements of the CWA, including National Pollutant Discharge Elimination System (NPDES) permitting, dredge and fill programs, and civil and

administrative penalties. Regulations promulgated as a result of the Porter-Cologne Act are codified in Sections 13000–14958 of the California Water Code. The Porter- Cologne Act is broad in scope and addresses issues relating to the conservation, control, and utilization of the water resources of the State. Under the Porter-Cologne Act, the quality of all the waters of the State (including groundwater and surface water) must be protected for the use and enjoyment by the people of the State.

Under the California Water Code, California is divided into nine regions governed by regional boards that, under the guidance and review of the SWRCB, implement and enforce provisions of the California Water Code and the CWA. The Project Site is located within Region 4, also known as the Los Angeles Region, and governed by the Los Angeles RWQCB (LARWQCB). The SWRCB’s principal responsibility is the development and implementation of California water quality policy and development of programmatic water quality control procedures to be followed by the RWQCBs. Accordingly, each RWQCB is required to formulate and adopt a local water quality control plan or Basin Plan for its region, which is ultimately incorporated into the California Water Plan. This Basin Plan must adhere to the policies set forth in the California Water Code and established by the SWRCB. The RWQCB is also given authority to include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Section 13050 of the California Water Code defines what is considered pollution, contamination, or nuisance. Briefly defined, pollution means an alteration of water quality such that it unreasonably affects the beneficial uses of water. Contamination means an impairment of water quality to the degree that it creates a hazard to the public health. Nuisance is defined as anything that is injurious to health, is offensive to the senses, or is an obstruction to property use, and which affects a considerable number of people.

### **California Anti-Degradation Policy**

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the federal Anti-Degradation Policy, the California Antidegradation Policy applies to all waters of the State, not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality shall be maintained and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resource.

### **California Toxics Rule**

The California Toxics Rule establishes water quality criteria for certain toxic substances to be applied to waters in the State. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-

term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the LARWQCB as having beneficial uses protective of aquatic life or human health.

### **Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties**

As required by the California Water Code, the LARWQCB has adopted a plan entitled Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan). The Basin Plan designates beneficial uses for surface waters and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's Anti-Degradation Policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable SWRCB and RWQCB plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan. The Basin Plan is a resource for the LARWQCB and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. The Basin Plan also provides valuable information to the public about local water quality issues.

### **National Pollutant Discharge Elimination System Permit Program**

#### ***Construction***

As noted above, the CWA requires coverage under an NPDES construction permit for stormwater discharges to surface waters associated with various construction activities, except activities that result in disturbance of less than 1 acre of total land area which are not part of a larger common plan of development or sale. The SWRCB has issued a statewide NPDES Construction General Permit for stormwater discharges from construction Sites (Water Quality Order No. 2009-0009-DWQ). Any Project that disturbs an area of more than 1 acre, as well as linear underground/overhead Project's disturbing over 1 acre, require a NOI to discharge under the Construction General Permit. The Construction General Permit includes three levels of risk for construction Sites based on calculated Project sediment and receiving water risk. The Construction General Permit includes measures to eliminate or reduce pollutant discharges through implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes the implementation and maintenance of Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the Site during construction. The design of BMPs generally follow the guidance provided in the Stormwater Best

Management Practice Handbooks written by the California Stormwater Quality Association (CASQA).<sup>16</sup>

Typical BMPs include:

- Erosion Controls: Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization
- Sediment Controls: Silt fences, sediment basins, sediment traps, check dams, fiber rolls, gravel bag berms, street sweeping and vacuuming, sandbag barriers, straw bale barriers, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
- Wind Controls: Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
- Tracking Controls: Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash.
- Non-Stormwater Management Controls: Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable, and irrigation water management.
- Waste Management Controls: Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use.

The Construction General Permit contains receiving water limitations that require stormwater discharges to not cause or contribute to a violation of any applicable water quality standard. The permit also requires implementation of programs for visual inspections and sampling for specified constituents (e.g., non-visible pollutants). In addition, based upon particular Project risk levels, monitoring is required for stormwater discharges.

### **Operation**

In accordance with CWA Section 402(p), municipal NPDES permits prohibit the discharge of non-stormwater except under certain conditions and require controls to reduce pollutants in discharges to the maximum extent practicable. Such controls include BMPs, as well as system, design, and engineering methods. A municipal NPDES permit has been issued to the County and 84 incorporated cities. Under the Los Angeles County Municipal NPDES Permit, permittees are required to implement a development planning program to address stormwater pollution. These programs require Project applicants for certain

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16 <https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook>

types of Projects to implement a Standard Urban Stormwater Mitigation Plan (SUSMP) throughout the operational life of the Project. The purpose of the SUSMP is to reduce the discharge of pollutants in stormwater by outlining BMPs which must be incorporated into the design plans of new development and redevelopment. In combination, these treatment control BMPs must be sufficiently designed and constructed to treat or filter the first 0.75 inch of stormwater runoff from a storm event. The City of Long Beach (City) is subject to the Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the City of Long Beach (Permit No. 99-060, NPDES No. CAS004003/ CI8052) (MS4 Permit). Standard BMPs are described in the City's LID BMP manual.<sup>17</sup> This is discussed in more detail below.

## ***Local***

### **County of Los Angeles Hydrology Manual**

The City of Long Beach has adopted the Los Angeles County Department of Public Works' Hydrology and Hydraulic Design Manual for storm drain planning and design calculations. The manual requires a storm drain conveyance system to be designed for a 25-year storm event, and the combined capacity of the storm drain and street flow shall be able to convey a 50-year storm event. In areas with a sump condition, the conveyance system shall be designed for a 50-year storm event. All drainage improvements in the Project vicinity are subject to review and approval by the City of Long Beach Department of Public Works.

### **City of Long Beach MS4 Permit**

As discussed above City of Long Beach is subject to the requirements of its MS4 Permit. The City's MS4 Permit specifies that the Project designer and/or contractor of all new development and redevelopment Projects that fall under specific "priority" Project categories must develop a SUSMP. Certain categories of development are considered "priority" because the LARWQCB has determined they have the greatest potential to degrade water quality. The three categories of "priority" Projects include: (1) ten or more home subdivisions; (2) 100,000 square feet or larger commercial developments; and (3) Project is located adjacent to or directly discharging to environmentally sensitive areas. The Project includes more than 100,000 square feet of commercial development and is considered a "priority" Project. To implement the requirements of the MS4 Permit, the City developed the Long Beach Stormwater Management Program, a comprehensive program of practices and activities aimed at reducing or eliminating stormwater pollutants from new development to the maximum extent practicable.

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<sup>17</sup> <https://www.longbeach.gov/lbds/planning/environmental/lid/>.

### **City of Long Beach Stormwater Management Program**

The Long Beach Stormwater Management Program was created in accordance with the CWA and the Porter-Cologne Water Quality Control Act. The objectives of the Program are to effectively prohibit non-stormwater discharges and to reduce the discharge of pollutants to the maximum extent practicable such that these discharges will not adversely impact the beneficial uses of receiving waters. The Long Beach Stormwater Management Program contains several elements, practices, and activities aimed at reducing or eliminating pollutants in stormwater, including a Development Planning/Construction Program and an Illicit Connection/Illicit Discharges Elimination Program.

The Program's Management Program for Development Planning and Construction addresses the planning of development and construction Projects that are not within the public street right-of-way. The intent of the management program is to have developers and owners consider stormwater quality management during a Project's planning phase, implemented during construction, and ultimately maintained throughout the life of the Project. Implementation of the management program will effectively prohibit non-stormwater discharges and reduce the discharge of pollutants into the stormwater drainage system.

The Program's Management Program for Illicit Discharges and Illicit Connections addresses procedures to identify, detect, and remove illicit discharges and improper disposal into the storm drain system. The objective of this program is to improve the quality of stormwater by effectively prohibiting non-stormwater discharges and by reducing the discharge of pollutants to the extent practicable through the implementation of the following programs and their components: illicit discharge elimination, illicit connection elimination, public reporting, and reporting hazardous substances entering the storm drain system.

### **City of Long Beach Municipal Code**

Long Beach Municipal Code (LBMC) Section 18.61 implements the NPDES requirements of the MS4 Permit and the subsequent requirements of the SUSMP, as mandated by the LARWQCB. LBMC Section 18.61 states that non-stormwater discharges into the storm drain systems or to receiving waters are prohibited except where such discharges are expressly permitted in the NPDES and SUSMP Regulations Manual. In addition, the LBMC provides that the NPDES and SUSMP regulations shall apply to new development and rehabilitation Projects that are subject to the design and implementation of post-construction controls to mitigate stormwater pollution.

LBMC Chapter 18.74 requires the use of low impact development (LID) standards in the planning and construction of development Projects, as contained in the LID Best Management Practices Design

Manual.<sup>18</sup> LID standards promote the goal of environmental sustainability by improving the quality of receiving water, protecting the Los Angeles and San Gabriel River watersheds, maintaining natural drainage paths, and protecting potable water supplies. A Project's LID Plan must demonstrate compliance with the requirements for infiltration, capture and reuse, evapotranspiration, and/or treatment on-Site through the use of BMPs. On-Site stormwater management BMPs must be properly sized, at a minimum, to infiltrate, evapotranspire, and/or store for use without any stormwater runoff leaving the Site to the maximum extent feasible, for at least the volume of water produced by a 0.75-inch storm event, the 85th percentile 24-hour storm event, or the volume of annual runoff based on unit basin storage water quality volume to achieve 80 percent or more volume treatment.

#### 4. ENVIRONMENTAL IMPACTS

##### *Thresholds of Significance*

In order to assist in determining whether a Project would have a significant effect on the environment, the City finds a Project may be deemed to have a significant impact to hydrology and water quality, if it would:

**Threshold HWQ-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.**

**Threshold HWQ-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.**

**Threshold HWQ-3: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.**

As discussed in the Initial Study (**Appendix I.1**), no potential for significant impacts was identified related to criteria (IV. E-3.i.), (IV.E-3.ii.), (IV.E-3.iii.), (IV.E-3.iv.), and (IV.E-4.) and, for this reason, further analysis is not provided in this EIR.

#### 5. METHODOLOGY

The analysis of potential impacts to surface water hydrology and surface water quality is based in part on the Preliminary Drainage Study and Conceptual LID Calculations (see **Appendix IV.I.1** and **Appendix IV.I.2**) prepared for the Project by KHR Associates. The surface water hydrology analysis provided below

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<sup>18</sup> City of Long Beach, Development Services, "Low Impact Development (LID) Best Management Practices (BMP) Design Manual," <http://www.longbeach.gov/globalassets/lbds/media-library/documents/orphans/lid/lid-bmp-manual---2nd-ed--final--121813>, accessed March 2021.

evaluates the change in surface water runoff patterns and quantity associated with the proposed Project and the level of impact based on the proposed Project implementation of these changes on the quality and quantity of the existing stormwater system.

## 6. PROJECT IMPACTS

**Threshold HWQ-1: Would the Project result in the violation of any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?**

**Less Than Significant Impact.**

### *Pre-Construction*

As shown in **Table IV.I-3**, remediation activities would continue on site until completion prior to construction activities. As stated in the RAP, existing soil on the Project Site is contaminated by TPH and has been undergoing bioremediation since the 1980s. Bioremediation was determined to be the most effective and appropriate method of extracting chemicals from the soil. The process of bioremediation includes periodic disking or tilling of the upper approximately nine-inches of TPH-impacted soil<sup>19</sup> to enhance oxygenation of the soil, and monitoring of moisture levels for conditions conducive to bioremediation. It includes the use of bacteria, fungi, or plants to alter contaminants, such as TPH, through the organisms’ metabolic processes. As the organisms are added within the contaminated soil, they are able to break down chemical contaminants and use them as energy. This process of remediating the soil would reduce contaminants which permeate groundwater supplies including TPH and arsenic. Completion of bioremediation on site prior to construction would reduce groundwater exposure to arsenic in the soil.

**Table IV.I-3  
Construction Phasing**

<b>Phases</b>	<b>Schedule</b>
Site Clearing	October 2022
Remediation	October 2022 to June 2023
Demolition and Grading	August 2023 to December 2023
Wet and Dry Utility Installation/ Street Construction	December 2023 to July 2024
Housing Construction	August 2023 to June 2026

19 As stated in the California Environmental RAP, “The descriptor ‘TPH-impacted soil’ is a generic term used herein and a term used by the City of Long Beach to describe sediments generated from gravity separation within on-site wastewater process tanks and within the clay-lined evaporation basins”

North of Baker Street, the RAP recommended placement of an Engineered Cap over the impacted soil in preparation for future use as recreational open space. The Engineered Cap would eliminate potential exposure pathways to the ground surface for the COCs that remain on site. Additionally, historical groundwater sampling data indicated that there would be minimal to no impact for the residual on site COCs to impact groundwater quality beneath the parcel north of Baker Street. As part of the engineering design of this cap, a treatability study would be performed on the TPH, arsenic, and lead-affected soil located north of Baker Street. The purpose of the treatability study is to ensure that the affected soil can be mixed with cement and cement kiln dust, to develop a suitable soil/cement mixture that would protect human health and groundwater in the long term.

After approval by the LARWQCB the Final would be implemented prior to the commencement of construction activities and any surface water and groundwater impacts from contaminated soil, both during construction or during operation, would be less than significant.

### ***Construction***

During construction of the proposed Project, particularly during the grading and excavation phases, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. Additionally, construction activities such as earth moving, maintenance/operation of construction equipment, and the handling, storage, and disposal of construction materials could contribute to pollutant loading in stormwater runoff. On-site watering activities to reduce airborne dust could also contribute to pollutant loading in runoff.

Project construction would disturb more than one acre of soil. As such, the proposed Project would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (Order No. 2009-0009-DWQ, as well as its subsequent amendments 2010-0014-DWQ and 2012-0006-DWQ) pursuant to NPDES requirements. In accordance with the State Construction General Permit Order No. 2009-0009-DWQ, a Storm Water Pollution Prevention Plan (SWPPP) would be developed and implemented prior to the construction of the proposed Project. The SWPPP would set forth Best Management Practices (BMPs), including erosion control, sediment control, non-stormwater management, and materials management measures, to minimize the discharge of pollutants in stormwater runoff. The SWPPP would specify BMPs to target pollutants of concern and reduce or eliminate pollutants in stormwater discharges. Standard BMPs are described in the Stormwater Best Management Practice Handbooks published by the California Stormwater Quality Association (CASQA).<sup>20</sup> The BMPs implemented would be determined at the time of construction. Additionally, the

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20 <https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook>

NPDES requires a Standard Urban Storm Water Mitigation Plan (SUSMP) to be implemented to reduce the level of pollutants in stormwater and urban runoff. Any temporary dewatering system(s) would treat groundwater prior to discharge to the public storm drain system, as authorized by a NPDES General Permit issued by the LARWQCB and a storm drain connection permit issued by the City of Long Beach Department of Public Works. BMPs such as sandbag barriers, earthen drainage dikes, swales, and/or sediment traps during construction would ensure surface runoff are directed and existing drainage patterns are maintained. Proof of compliance with the General Permit including the SWPPP and SUSMP, would be required pursuant to Chapter 18.61 of the LBMC, prior to the issuance of grading, building, or occupancy permits.

The proposed Project would reduce the risk of erosion and sediment transport and transport of other potential pollutants from the Project Site during the construction phase through implementation of BMPs and compliance with other applicable City requirements to minimize potential water degradation impacts. Therefore, discharges during construction would not cause: (1) pollution that would alter the quality of the waters of the State (i.e., SCR) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination of the quality of the waters of the State by waste to a degree that creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health, affect an entire community or neighborhood or any considerable number of persons, and occurs during or as a result of the treatment or disposal of wastes. The BMPs discussed above would ensure effective control of not only sediment discharge, but also of pollutants associated with sediments, such as and not limited to total petroleum hydrocarbons (TPHs), arsenic, and lead. With implementation of the construction related BMPs and compliance with all other applicable regulatory requirements, construction of the proposed Project is not anticipated to create pollution, contamination or nuisance as defined in Section 13050 of the CWC or cause a regulatory standard to be violated, as defined in the applicable NPDES stormwater permit or the Basin Plan for the receiving water body. Accordingly, the proposed Project 's construction impacts on surface water and groundwater quality would be less than significant.

Through compliance with NPDES requirements, local regulations, and a finalized RAP approved by the LARWQCB, construction of the Project would not result in discharges that would violate any water quality standards or waste discharge requirements.

## ***Operation***

### **Proposed Drainage System**

Stormwater generated by the Project would be collected by an on-site drainage system that would connect into a new City maintained storm drain line that would run under the current right of way of Baker Street

and discharge into the Los Angeles River. Since the stormwater would eventually discharge into a tidally influenced portion of the Los Angeles River, no erosion or negative downstream impacts would occur.

The Preliminary Drainage Study used HydroCalc software, developed and provided by Los Angeles County Public Works, to calculate various parameters using the modified rational method, which is an iterative process. The proposed Site is divided into five subareas (see **Figure 4.I-1: Proposed Hydrology Map**): stormwater runoff in each of the proposed subareas (P1 through P3) would be collected by private on-site catch basins that drain to the subarea's respective biofiltration planter to be treated. Filtered and high flows are directed from the biofiltration planters to a private storm drain network that ultimately connects to a new city storm drain line located within a portion of the vacated Baker Street near the intersection with the westerly on-site private road. Subarea P5 is mostly vegetated open space that is collected by area drains that connect to the new city storm drain within the vacated Baker Street. Two City catch basins would be constructed in the right of way of Baker Street near the Site's entrance to collect runoff from a portion of Golden Avenue and Baker Street that currently drains into the Project Site.

The catch basins would be connected to the City storm drain main that runs westerly through the Project Site and discharges into the Los Angeles River. Subarea P4 is an approximately 10-foot deep portion of the entry drive at Wardlow Road within which stormwater would flow untreated into the right of way of Wardlow Road. Stormflow from this initial portion of the entry drive would have equivalent characteristics to the stormflow from Wardlow Road, with which it would mix and enter the public storm drain system through a curbside drain east of the Project.

### **Project Operations**

Operation of the proposed Project would introduce sources of potential stormwater pollution that are typical of residential uses (e.g., cleaning solvents, pesticides for landscaping, and petroleum products associated with circulation areas). Stormwater runoff from precipitation events could potentially carry urban pollutants into municipal storm drains. A RWQCB compliant SUSMP would be implemented on site in accordance with the LID program which was developed as part of the municipal stormwater program at the City. Further, applicable postconstruction BMPs have been incorporated into the design of the Project as discussed previously. Specifically, a biofiltration system would be installed that use landscaped basins in which stormwater is collected and flows through vegetation, gravel and other bioretention media to filter out pollutants.

# LEGEND

DRAINAGE AREA BOUNDARY

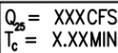


DRAINAGE AREA ID



DRAINAGE AREA

RUNOFF  
TIME OF CONCENTRATION



FLOW PATH

SLOPE

S

SLOPE HEIGHT

H

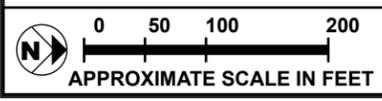
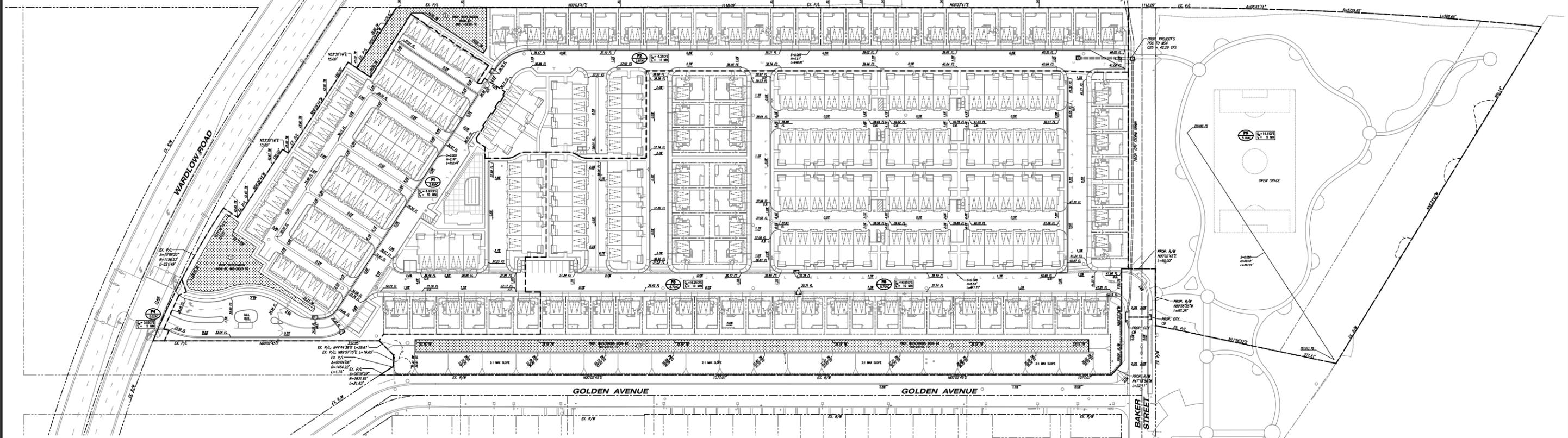
SLOPE LENGTH

L

BIOFILTRATION (LID BMP) ID



PROPOSED BIOFILTRATION AREA



SOURCE: KHR Associates - April 2020

FIGURE IV.I-1



## Proposed Hydrology Map

As part of the analysis, Conceptual LID BMP Calculations document (see **Appendix IV.1.2**) were prepared to support a feasibility analysis to determine the most appropriate BMP for the first flush or initial surface runoff.<sup>21</sup> Calculations were performed for infiltration, capture, and use, and/or biofiltration BMPs. Infiltration along with Capture & Use was deemed infeasible due to potential soil contamination from the historic use of the site by oil companies and the open status as a cleanup site on the State's GeoTracker website. Biofiltration planters (flow through planters) were chosen for management of the residential portion of the Project's water quality design volume. The proposed residential area is divided into three drainage management areas that are collected by catch basins with each drainage area discharging to a Flow through planter for biofiltration of the water quality design volume. A small portion (902 square feet) of the driveway off Wardlow Road would drain off site untreated. The open space area at the northern portion of the Site is approximately 6 percent impervious walk area that drains into the adjacent landscaping. Once treated, the Project's stormwater would be directed to a proposed city storm drain system that discharges into the Los Angeles River.

Calculations show biofiltration basins used to capture runoff would be sufficient in reducing the contamination from the soil into the groundwater (see **Appendix IV.1.2**). The Project area would not experience a drastic change in peak discharge with proposed Project buildout and no negative impacts to downstream receiving waters will occur with the implementation of biofiltration.

Additionally, the Project would comply with the Long Beach LID BMP Design Manual, which requires BMPs to be implemented and includes biofiltration basins, such as those stated in the Conceptual LID BMP document. These basins collect the stormwater and flow it through vegetation, gravel and other bioretention media to filter out pollutants.

The Project would comply with NPDES guidelines to reduce construction and operation impacts related to surface and groundwater quality. Additionally, Chapter 18.74 of the LBMC regulates the implementation of the LIDs and BMPs for Project s in the City. Based on the findings of the Conceptual LID BMP Calculation and compliance with existing policies and regulation the proposed Project would have a less than significant impact to local surface and groundwater quality.

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21 KHR Associates, *Conceptual LID BMP Calculations*, April 22, 2020, Appendix IV.1.2.

**Threshold HWQ-2: Would the Project result in substantially decreased groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?**

**Less Than Significant Impact.**

### ***Construction***

As discussed previously, due to the operational history and identified contaminants of concern (COCs) associated with groundwater quality, there are ongoing soil remediation activities on the site as well as continued plans for future remediation which would be completed prior to construction commencement. A Final RAP would be approved by RWQCB and implemented prior to the commencement of construction activities and any groundwater supply impacts from contaminated soil would be less than significant.

Construction activities have the potential to discharge sediment and pollutants to storm drains and receiving waters, thereby leading to potential groundwater quality impact. As discussed previously, construction activities would reduce the risk of erosion and sediment transport and transport of other potential pollutants from the Project Site runoff during the construction phase through implementation of BMPs and compliance with other applicable City requirements to minimize potential water degradation impacts. Compliance with applicable City requirements and implementation of BMPs would minimize impacts to groundwater supplies through contaminated runoff during construction to a less than significant level.

There are currently no wells within the Project Site that are used to pump groundwater for potable uses. Groundwater was encountered in the exploratory borings and monitoring wells installed across the Project Site at depths ranging from 30 feet to 51 feet bgs.<sup>22</sup> The proposed Project would include excavations to a maximum depth of approximately 8 feet below the ground surface. Since excavation was not determined to be an approved method of remediation and large quantities of soil would not be removed, excavation activities on site are not anticipated to encounter or physically impact groundwater depositories.

The City retrieves groundwater from wells located throughout the City limits and has water rights to pump approximately 33,000 acre-feet of groundwater per year; this amount fulfills about 60 percent of the City's overall needs.<sup>23</sup> The remainder of the City's water supply is sourced from imported water from the Colorado River and Sacramento-San Joaquin Bay Delta. The major aquifers beneath Long Beach are known

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22 Converse Consultants, *GeoHazards Report*, Proposed River Park Residential Development, June 17, 2020.

23 Long Beach Water, *Ground, and Imported Water*, <https://www.lbwater.org/water-sources/ground-and-imported-water/#ground-water>. Accessed March 2021.

as the 400-foot Gravel, the 200-foot Sand, and the Gaspar Zone.<sup>24</sup> These aquifers have a capacity for storing approximately 30 million acre-feet of water. Water usage during construction would include usage of water trucks for dust control and potable water for drinking and hand washing for workers on site. The water usage on site during construction activities is anticipated to be minimal and would have minimal impact on local supply of groundwater. Any temporary dewatering system would extract, treat, and discharge groundwater to the public storm drain system, as authorized by a General NPDES Permit issued by LARWQCB and a storm drain connection permit issued by the jurisdictional storm drain agency. Any discharge of groundwater during construction of the Project would occur pursuant to, and comply with, the applicable permit requirements of the General NPDES permit.

Since operation of construction dewatering systems would be temporary and would draw water across any substantial distance for this reason, local groundwater hydrology in the immediate vicinity of the Project Site would be minimally affected. In addition, if dewatering is necessary, operation of the temporary system would not be anticipated to adversely impact the flow rate or direction of groundwater. Any construction dewatering that occur due to the proposed Project development is not anticipated to change potable water levels sufficiently enough to reduce the ability of water utilities to use the groundwater basin for public water supplies or to reduce yield of nearby well fields.

Therefore, Project impacts associated with groundwater supply and recharge during construction of the Project Site would be less than significant.

### ***Operation***

As previously stated, no water supply wells are located on the Project Site. Regarding groundwater recharge in a groundwater basin, the effect of urbanization on recharge to underlying groundwater is dependent on land uses, water uses, vegetative cover, and geologic conditions. Groundwater recharge may be reduced if areas currently available for the infiltration of rainfall runoff are reduced and permeable areas located above groundwater basins are replaced by impermeable surfaces, such as buildings, concrete hardscape areas, driveways, and access roads. Project implementation would involve the creation of new impervious surfaces, which would result in a reduction in the amount of surface water that would infiltrate the soil to the groundwater table. According to the Conceptual LID BMP Calculations report, approximately 61.1 percent of the Project area would be impervious after Project build-out; thus, leaving approximately 38.9 percent of pervious area throughout the Site. Water infiltration at the Project Site has been deemed infeasible due to potential soil contamination. Therefore, groundwater

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24 *City of Long Beach General Plan, Conservation Element*, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/1973-conservation-element>, accessed March 2021.

recharge through water infiltration is not an option at this site.<sup>25</sup> Because of this, Project implementation would not interfere with groundwater recharge as the Project Site is not suitable for water infiltration and groundwater recharge.

The proposed Project would pursue Leadership in Energy and Environmental Design (LEED) certification for residential Building Construction and Demolition (BC+D) as required by LBMC.<sup>26</sup> Part of this certification would include providing efficient water use features and components which would reduce water usage.<sup>27</sup> Under applicable LEED standards either no irrigation for landscapes that do not require a permanent irrigation system beyond a maximum two-year establishment period or reducing irrigation for landscapes by 30 percent is required. Reductions must be achieved through plant species selection and irrigation system efficiency, as calculated by the Environmental Protection Agency (EPA) WaterSense Water Budget Tool. For indoor water use, reductions in aggregate water consumption must be from 20 percent from the baseline. All newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling must be WaterSense labeled. To support water management and identify areas for additional water reduction, LEED requires installation of permanent water meters that measure the total potable water use for the building and associated grounds. Meter data must be compiled into monthly and annual summaries and be shared with the United States Green Building Council (USGBC) for a five-year period beginning on the date the Project accepts LEED certification or typical occupancy.

The proposed Project would include 226 single-family dwellings. According to the Long Beach 2020 Urban Water Management Plan, the single-family sector water usage was approximately 15,951 acre-feet per year in 2019 according to recent billing data and the projected demand for the year 2050 would be 16,082 AFY, an approximately 131 AFY increase in water usage for the single-family residential sector.<sup>28</sup> The Long Beach Water Demand Forecast, based on econometric demand models and estimates of future conditions, explains that per unit water use rates are expected to decline between the year 2020 and 2050.<sup>29</sup> Reductions in per unit water rates can be attributed to the LEED requirement in the City for all newly constructed buildings. Under this forecast, single-family residential water usage would decline from 213 to 186 gallons per home per day averaging about 13 percent decrease. Based on this calculation, the development is anticipated to increase local water usage by 42,046 gallon or the equivalent of 0.00056 acre-foot, an incremental increase in water usage which is within the forecasted increase in water usage

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25 KHR Associates, *Conceptual LID BMP Calculations*, April 22, 2020, Appendix IV.I.2.

26 LBMC, Ch. 21, Section 21.45.400 – Green building standards for public and private development.

27 U.S. Green Building Council, *LEED v4 for Building Design and Construction*, [https://www.usgbc.org/Sites/default/files/LEED%20v4%20BDC\\_07.25.19\\_current.pdf](https://www.usgbc.org/Sites/default/files/LEED%20v4%20BDC_07.25.19_current.pdf), accessed April 2021.

28 Long Beach Water, 2020 Urban Water Management Plan (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf). Accessed July 2021.

29 Long Beach Water, *Long Beach Water Demand Forecast*, <https://lbwater.org/wp-content/uploads/2020/04/LBWD-WRP-1.pdf>, accessed March 2021.

amount within the City. According to the Urban Water Management Plan, the City has adequate supplies to meet future water needs with forecasted population growth, of which the Project is a part.

Based on these estimates, the water required for the construction and operation of the proposed Project would not significantly affect the groundwater supplies or interfere substantially with groundwater recharge. Project Impacts on groundwater recharge and groundwater supply would be less than significant.

**Threshold HWQ-3: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

**Less Than Significant Impact.**

### **Construction**

Groundwater was encountered in the exploratory borings and monitoring wells installed across the Project Site at depths ranging from 30 feet to 51 feet bgs.<sup>30</sup> According to historic groundwater contours and the identified groundwater depths, the regional groundwater table is not expected to be encountered during the planned construction of the proposed Project which will go to a maximum depth of 8 feet. Additionally, compliance with all applicable federal, state, and local requirements concerning the handling, storage, and disposal of hazardous waste would reduce the potential for Project construction to release contaminants into groundwater, expand the area or increase the level of groundwater contamination, or cause a violation of regulatory water quality standards at an existing production well.

There are no identified sustainable groundwater management plans, so this does not apply to the proposed Project. According to the Water Quality Control Plan for the Central Coast Basin, the objective of the plan is to limit the degradation of water quality beyond the levels or limits established as water quality objectives; controllable conditions shall not cause further degradation of water quality.<sup>31</sup> There is no defined Sustainable Groundwater Management Plan for the City. However, the proposed Project would comply with all requirements of the City of LBMC related to water quality, the 2020 Urban Water Management Plan, the City's Stormwater Management Plan, and the City's Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges from the City of Long Beach (City of Long Beach MS4 Permit).

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30 Converse Consultants, *GeoHazards Report*, Proposed River Park Residential Development, June 17, 2020.

31 Regional Water Quality Control Board, Central Coast Region, *Water Quality Control Plan for the Central Coastal Basin*, [https://www.waterboards.ca.gov/centralcoast/publications\\_forms/publications/basin\\_plan/docs/2019\\_basin\\_plan\\_r3\\_complete\\_webaccess.pdf](https://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/docs/2019_basin_plan_r3_complete_webaccess.pdf), accessed March 2021.

As discussed previously, the proposed Project is subject to the LARWQCB Basin Plan which is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Construction associated with the proposed Project would be temporary and subject to the requirements of the County MS4 Permit. Additionally, the proposed Project would be required to comply with the statewide General Permit which requires that a SWPPP identify potential sources of pollution and specify runoff controls, or BMPs during construction for the purpose of minimizing the discharge of pollutants in stormwater. Accordingly, the construction contractor for the Project would be required to implement BMPs that would meet or exceed local, State, and federal mandated guidelines for stormwater treatment to control erosion and to protect the quality of surface water runoff during the construction period.

With the implementation of BMP measures and compliance with statewide General Permits and SWPPP, stormwater runoff impacts during construction would be minimized. Therefore, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan during construction of the Project Site and impacts would be less than significant.

### ***Operation***

Due to the increase in impervious surfaces, the Project would be required to implement post-construction BMPs to mitigate stormwater pollution during operation and prepare a LID Plan or equivalent, in compliance with the City of Long Beach LID BMPs Design Manual. The LID BMPs are designed to capture, slow, clean, and infiltrate rainfall, resulting in a cleaner, less intensive stormwater discharge from the site. Biofiltration design requirements as supported by the Long Beach LID BMP Design Manual<sup>32</sup> include: where applicable, biofiltration BMPs shall be constructed with a minimum planting soil depth of 2 feet (3 feet preferred) and topped with 3 inches of mulch; where applicable, biofiltration BMPs shall be designed to drain below the planting soil in less than 48 hours and completely drain from the underdrains in 96 hours; underdrains shall be constructed of slotted PVC pipe, sloped at a minimum 0.5 percent and placed per Table 4.5 requirements; if system is online, an overflow is present and safely conveys flows to downstream stormwater conveyance system, an additional BMP, or an alternatively acceptable discharge point; inflow to swales shall be directed towards the upstream end of the swale; bioinfiltration BMPs and high-flow biotreatment BMPs designed for secondary infiltration shall pass the infiltration feasibility screening for all hazardous criteria and if necessary, weep holes shall be used to increase infiltration; Swales shall be constructed with a bottom width between 2- and 10-feet (Check dams shall be incorporated at the appropriate distances. Check dams are 12-inches in height and include a 6-inch deep notch in the middle of the check dam that is 1-2 feet wide. Each check dam extends across the entire width of the swale's base.); and filter strips shall be constructed to extend across the full width of the tributary

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32 City of Long Beach, *Low Impact Development Best Management Practices Design Manual*, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/orphans/lid/lid-bmp-manual---2nd-ed--final--121813>, accessed April 2021.

area and be designed with sufficient slope in the flow direction to prevent ponding. These measures ensure stormwater runoff is treated on site whenever possible and if necessary, any stormwater which overflows on-site biofiltration treatments capacity can reach the appropriate stormwater conveyance system and be discharged off site when necessary.

Additionally, maintenance during operation would ensure the stormwater biofiltration systems continue to function properly and provide treatment to on-site runoff. On-site maintenance activities during operation include the maintenance of on-site soil, including flow entrances, ponding areas and surface overflow areas to be inspected for erosion periodically in order to identify soil and/or mulch to be replaced as necessary; Site vegetation shall be maintained as frequently as necessary to maintain fire protection, public safety, and the aesthetic appearance of the Site as well as the filtration capabilities; BMP inlets will be inspected and maintained to ensure even flow enters the facility and sediment collecting at the inlet will be removed as necessary; and proprietary devices will be inspected and maintained in accordance with the requirements of the manufacturer. With functional biofiltration systems on site during operation, on-site stormwater runoff during operation would be limited to a minimum and any overflow would be directed to appropriate storm drain inlets to be discharged.

Construction and operation of the proposed Project would not conflict with or obstruct implementation of a water quality control plans. Implementation of the proposed Project would have a less than significant impact.

## **7. CUMULATIVE IMPACTS**

### **Less Than Significant Impact.**

A cumulative analysis for hydrological impacts evaluates whether impacts of the proposed Project and related projects, when taken as a whole, would have a significant environmental impact on hydrological resources. The geographic area for cumulative analysis of hydrological resources is the City of Long Beach. The City is located in a highly developed urban setting with most new development occurring as in-fill development, such as the proposed Project. As described above, the proposed Project Site is not suitable for water infiltration for groundwater recharge and would have a less than significant impact on water supply and water degradation for both surface water and groundwater. The proposed residential and open space development would have a less than significant effect on the hydrological resources in the City and the region.

The proposed Project, combined with other reasonably probable future related developments would not result in a significant cumulative impact related to hydrological resources because the proposed Project and the cumulative growth Citywide would not exceed the water usage forecast anticipated in City-wide and regional planning documents. Additionally, the Project Site would not remove any potential groundwater recharge area due to previous site contamination which renders the Site ineligible as a

groundwater recharge site. In addition, all future developments would be required to conduct individual CEQA evaluations on a Project-by-Project basis to meet the City's long-term water quality and water supply demand over time. Cumulative Project impact would be less than significant.

## **8. MITIGATION MEASURES**

Project impacts and cumulative impacts would be less than significant; therefore, no mitigation measures are required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Implementation of Project Design Features and accordance with required federal, State, and local applicable policies would reduce potential Project and cumulative hydrology and water quality impacts to less than significant levels. Therefore, there are no significant unavoidable adverse impacts of the proposed Project related to hydrology and water quality.

### 1. INTRODUCTION

This section of the Draft EIR analyzes the Project's consistency with applicable policies and regulations and the relationship between the Project and surrounding land uses. Prior to the preparation of this Draft EIR, an Initial Study (included in **Appendix I.1** of this Draft EIR) was prepared to assess potential environmental impacts on land use and planning. Potential impacts to land use and planning were considered in the Project's Initial Study under Section 11. Land Use and Planning, Threshold (a) and Threshold (b). The discussion concluded that impacts to land use and planning would result in a less than significant impact. However, City Planning staff decided to provide a more thorough evaluation of potential land use and planning impacts in the EIR.

### 2. ENVIRONMENTAL SETTING

#### **Existing Conditions**

The City of Long Beach occupies the southernmost portion of Los Angeles County. The City is bordered by the cities of Carson and Los Angeles to the west, Paramount and Lakewood to the north, and Los Alamitos and Seal Beach to the east. The City also surrounds the City of Signal Hill on all sides in its central area. The Pacific Ocean abuts the City's southern border. Land subdivision began in the areas that were later to become Long Beach in the late 19th century, the City incorporated in 1908, and it continued to develop through various cycles of booms, busts, and steady development throughout the 20th century. Land uses in the city encompass a wide variety of urban uses including residential neighborhoods; the concentration of civic and tourist-oriented uses in the City's downtown; commercial developments in the downtown and in shopping centers and commercial strips throughout the city; industrial areas such as the Port of Long Beach; and public and institutional uses such as parks, schools, and universities such as California State University Long Beach.

#### ***Project Site***

The Project Site is located within the neighborhood of Wrigley Heights near the western edge of the City. The Site is bordered by Interstate 405 (I-405) to the north, Golden Avenue and residential uses to the east, Wardlow Road to the south, and the County-owned open space corridor bordering the Los Angeles River to the west. The Los Angeles River, Dominguez Gap Wetlands, and bicycle and pedestrian paths run along the western boundary of the Site. Industrial uses and the Long Beach Freeway are located on the opposite side of the Los Angeles River. The Los Angeles River Trail along the west side of the Project Site is a recreational trail available to pedestrians, bicyclists, and horses. West of the Los Angeles River is Interstate 710 (I-710) and additional residential development. There are two existing parks – Baker Street

Park and Wrigley Heights Dog Park – adjacent on the east side of the Project Site. Baker Street Park lies to the north of the Project Site and includes amenities such as a playground, concrete picnic tables and benches, and a walking path.

### **General Plan Land Use Designations**

The Project Site is designated Founding and Contemporary Neighborhood (FCN). As set forth in the Land Use Element of the Long Beach General Plan, the FCN is a Neighborhood Place Type. The Long Beach General Plan Land Use Element defines Place Types as a more flexible and comprehensive approach to land use planning that de-emphasizes specific uses and focuses on the form and character of neighborhoods. Place Types allow for a wide variety of compatible and complementary uses in addition to the primary permitted land uses.<sup>1</sup> Under the FCN general plan designation, the allowed uses include single-family and low-density housing and neighborhood-serving low-intensity commercial uses. Residential uses are allowed at a density of 7- 18 dwelling units per acre (du/ac). The maximum height allowed is 2 stories per the General Plan. The Project has a density of approximately 14.6 du/ac within the 15.5 acres proposed for residential development, which is within the range of density allowed under the general plan designation.

### **Zoning**

The existing zoning on Site is Commercial Storage (CS) and Single-Family Residential Standard Lot (R-1-N) with a Horse (H) Overlay District over a portion of the Project Site. The CS zone allows for commercial land uses consisting of the consisting of the rental of space for the storage of personal property, such as mini-warehouse and the storage of recreational vehicles.<sup>2</sup> The R-1- N district is a single-family residential district with standard lots.<sup>3</sup> The H Overlay District modifies the underlying zoning to allow for the keeping of horses and horse related facilities on private properties in the City and outlines the requirements and standards for horse keeping, including definition of the number of horses allowed in different zones.<sup>4</sup>

### **Surrounding Area**

Land uses surrounding the Project Site are mostly residential or roadway and river. To the east are detached single-family condominium units and single-family detached homes in the Wrigley Heights

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1 Long Beach Development Services, General Plan- Land Use Element, November 2021.

2 City of Long Beach, Long Beach Municipal Code, Chapter 21.32- Commercial Districts, [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.32CODI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.32CODI). Accessed November 2021.

3 City of Long Beach. Long Beach Municipal Code. Chapter 21.31- Residential Districts.

[https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.31REDI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.31REDI). Accessed November 2021.

4 City of Long Beach. Long Beach Municipal Code. Chapter 21.38- Horse Overlay District.

[https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.38HOOVDI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.38HOOVDI). Accessed November 2021.

neighborhood. The west is the channelized LA River bordered by a County-owned open space corridor. To the north is the 405 freeway beyond which is vacant commercial land and the Los Cerritos residential neighborhood. To the south of Wardlow Road is the North Wrigley residential neighborhood. The existing neighborhood at Baker Street & Golden Avenue is located adjacent to the northeast corner of the Project Site. There also a public dog park on the north side of Wardlow Road, adjacent to the southeast corner of the Project Site.

The Project is located immediately east of the LA River, which provides a walking path adjacent to the eastern edge of the river for which there is a pedestrian entrance at the northwestern corner of De Forest Avenue and West 34th Street, located south of Wardlow Road. There is also an existing informal path connecting the end of Baker Street with the LA River walking path.

### **General Plan Land Use Designations**

To the east of the Project Site is designated Founding and Contemporary Neighborhood (FCN) which includes low-density residential uses. To the north, south, and east is designated Open Space (OS) and further south past Wardlow Road is designated Multiple Family Residential Low Density (MFR-L). As stated previously, the Founding and Contemporary Neighborhood PlaceType allows sensitive infill developments and the preservation and protection of single-family neighborhoods, while providing enough flexibility for residents to reinvest and adapt their homes to meet changing lifestyles and long-term maintenance needs. The Open Space PlaceType serves the overall purpose of promoting the emotional and physical health of urban residents through contact with natural environments. The Multi-Family Residential–Low PlaceType represents the housing stock in lower density multi-family residential areas, with a maximum density of 29 dwelling units per acre.

### **Zoning**

The residential development to the east, adjacent to the Project Site is zoned as R-1-N and R-1-S, to the north of the Site is zoned for Public Right-of-Way (PR), and south of the Project Site includes R-1-N and R-4-R zoning. The R-1-S District is a single-family residential district with small lots. The District recognizes the existing subdivision pattern and is established to accommodate the requirements of a modern home on existing small lots. The R-1-N District is a single-family residential district with standard lots. This District recognizes the outdoor lifestyle characteristic of Southern California and is established to protect such areas from overcrowding and conversion to higher densities. The R-4-R district is a moderate density, multifamily residential district with restrictions on building height. It is intended to provide a moderate density use consistent in scale with existing older and lower density developments. The district is designed to encourage full development in established moderate density neighborhoods. The Public Right-of-Way

(PR) District is established to create, enhance, and preserve open areas of public rights-of-way and to protect such areas from encroachment by other uses.

### **3. REGULATORY SETTING**

#### ***Regional***

##### **Southern California Association of Governments**

SCAG is a council of governments representing Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is the federally recognized Metropolitan Planning organization (MPO) for this region, which encompasses more than 38,000 square miles. SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for Projects requiring environmental documentation under federal and State law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the southern California region's MPO, SCAG cooperates with South Coast Air Quality Management District (SCAQMD), the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents. SCAG has developed regional plans to achieve specific regional objectives.

##### ***Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS)***

SCAG is responsible for the designated Regional Transportation Plan (RTP), including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. The 2020-2045 RTP/SCS, also known as Connect SoCal, was adopted by SCAG on September 3, 2020. The 2020–2045 RTP/SCS is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern.

The 2020-2045 RTP/SCS reflects changes in economic, policy, and demographic conditions in the region.<sup>5</sup> In the SCAG region, annual growth is slowing down in concert with the national population growth trend. According to SCAG population growth in the region slowed down from about 0.85 percent in 2020 to about 0.45 percent by 2045. These changes are driven by declines in fertility and affected by high housing costs in the region. The population in the region is also growing older, with a median age of 32.3 in 2000 to 35.8 in 2016. By 2045 the median age is expected to reach 39.7. Net migration to the region has also slowed over the last 30 years.

The guiding policies and strategies for the 2020-2045 RTP/SCS are intended to focus future investments on the best-performing Projects and strategies to preserve, maintain, and optimize the performance of

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5 SCAG, Connect SoCal, 2020-2045 RTP/SCS, [https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocialplan\\_0.pdf?1606001176](https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocialplan_0.pdf?1606001176). Accessed November 2021.

the existing transportation system. The Project's consistency with the applicable goals and strategies of the 2020-2045 RTP/SCS is provided in **Table IV.J-1: SCAG 2020-2045 RTP/SCS Project Consistency Analysis** of this Draft EIR.

Applicable goals from the 2020-2045 RTP/SCS include:

- Goal 2:** Improve mobility, accessibility, reliability, and travel safety for people and goods.
- Goal 3:** Enhance the preservation, security, and resilience of the regional transportation system
- Goal 4:** Increase person and goods movement and travel choices within the transportation system.
- Goal 5:** Reduce greenhouse gas emissions and improve air quality
- Goal 6:** Support healthy and equitable communities.
- Goal 9:** Encourage development of diverse housing types in areas that are supported by multiple transportation options.
- Goal 10:** Promote conservation of natural and agricultural lands and restoration of habitats.

## ***Local***

### **City of Long Beach General Plan**

California requires that every city and county prepare a comprehensive General Plan that guides decision making and implementation related to land use, zoning, redevelopment, environmental justice, planning, and general decision making of the jurisdiction into the future. Each General Plan must include seven required elements: land use, circulation, housing, conservation, open-space, noise, and safety. Additionally, other, optional elements may also be included in a General Plan, such as air quality, capital improvements/ public development, energy, flood management, geothermal, parks and recreation, and water.

The current Long Beach General Plan was adopted by the Long Beach City Council in 1973 and has been updated and supplemented periodically. The current General Plan has twelve elements: Air Quality, Conservation, Historic Preservation, Housing, Land Use, Local Coastal Program, Mobility, Noise, Open Space and Recreation, Public Safety, Seismic Safety, and Urban Design. The Housing Element has been updated on a schedule prescribed by the California Department of Housing and Community Development (HCD), most recently on January 7, 2014. The current Mobility Element was adopted in 2013. In December

of 2019, the City adopted the Land Use Element and the Urban Design Element. The update to the Land Use Element provides a blueprint for the City's growth from the time of adoption to the year 2040. The Urban Design Element focuses on the preservation of existing neighborhoods and building upon them to allow for continued adaptation and improvement of the build environment. The Project's consistency with the applicable goals and strategies of the Long Beach General Plan is provided in **Table IV.J-2: Long Beach General Plan Consistency Analysis** of this Draft EIR.

### **Long Beach Municipal Code - Zoning**

The City of Long Beach Municipal Code (LBMC) codifies regulations implementing the City's General Plan. Title 21, Zoning of the LBMC includes numerous regulations governing development within the City. Title 21 divides the City into zoning districts and provides development standards for each district, including permitted uses, density, and intensity of uses, building height, and other standards for development and activity. The City also is developing a transitional form-based zoning code, Title 22, that will eventually replace Title 21 outside of the City's Coastal Zone. Currently Title 22 currently only applies to an initial program area in North Long Beach

### ***Other Plans and Studies***

A series of studies have been prepared since 1996 addressing the Los Angeles River and planning for parks in the City of Long Beach that relate to the proposed Project and Project Site. These studies include the 2007 Long Beach RiverLink Plan, 2018 Lower LA River Revitalization Plan, 2020 Los Angeles River Master Plan and the 2021 City of Long Beach Park Acquisition Feasibility Report. A description of each of these plans and studies is provided below.

### **Long Beach RiverLink Plan**

The RiverLink Plan was initiated in 2003, when the City's Department of Parks, Recreation, and Marine contracted with the San Pedro Bay Estuary Project, a local nonprofit agency, to prepare a study of opportunities to create a continuous greenway along the east bank of the Los Angeles River. The west bank of the Los Angeles River was not included in the study due to the close proximity of the 710 Freeway, and the discussions that were taking place regarding its potential redesign. The plan was presented to the Parks and Recreation Commission in December 2004 and approved in concept by the Parks and Recreation Commission in April 2005, with staff suggested revisions and recommendations.<sup>6</sup>

In 2007, the Department of Parks, Recreation, and Marine created an updated document based on the original concepts. The RiverLink Plan provided a conceptual vision of an integrated open space system and

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<sup>6</sup> City of Long Beach, Department of Parks, Recreation and Marine, Long Beach RiverLink. February 2007.

a framework to connect west side neighborhoods, and greater Long Beach, with the Los Angeles River. When fully implemented, RiverLink would comprise 263 acres of open space. In February 2007, the Parks and Recreation Commission approved RiverLink in concept, and recommended that plan be forwarded to the Planning and Building Department for inclusion in the General Plan update. The Riverlink plan was not, however, incorporated into the City's General Plan and is therefore not part of the City's General Plan.

The RiverLink plan has four main components: Destinations, Gateways, Pathways, and Connections. Each of these planning concepts is set forth below.

### *Destinations*

Destinations are places where accessible recreational open space or habitat restorations are located. The Project site is located within Destination 7: Wrigley Heights – South. Also located within Destination 7 are the Los Angeles River Right-of-Way and two City-owned parcels, Wrigley Heights Dog Park and Baker St. Park. The RiverLink Plan recommends that as much of the area become an open space destination as possible, suggesting recreational components such as a restored wetland, riparian woodland, neighborhood park, pedestrian and bike paths, and other features.

### *Gateways*

Gateways are those points where a visitor begins the journey along a pathway towards a connection or destination. The closest suggested Gateway marker is located at approximately Pacific Ave. and Wardlow Road. This location is located outside of the Project area, and this aspect of the RiverLink Plan is not directly applicable.

### *Pathways*

Pathways facilitate movement in and around the neighborhoods to the Los Angeles River. There are two types of Pathways in RiverLink: the Los Angeles River Trail (LARIO trail) and CityLinks. CityLinks are bicycle and pedestrian pathways that connect neighborhoods to the LARIO trail. A Citylink is proposed surrounding Destination 7, connecting back to the Wardlow Road Class 2 (on-street) bicycle path. The recommended CityLink includes lands outside of the Project area and this aspect of the RiverLink Plan is not directly applicable.

### *Connections*

Connections link pathways together. The RiverLink Plan identified Connections providing access to the LARIO trail or the Destinations. The closest Connections to the Project area are north of the 405 freeway

and at approximately Spring St. and Pacific Ave. As these Connections are well outside of the Project area, this aspect of the RiverLink Plan is not applicable

### **Lower LA River Revitalization Plan**

In 2015, California State Assembly Bill (AB 530) was passed with the intentions of reviving the Lower Los Angeles River by developing a watershed-based, equitable, community-driven plan. The Working Group, chaired by the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, included city representatives and community advocates who came together to create the Lower Los Angeles River Revitalization Plan (LLARRP). The Lower LA River Revitalization Plan was finalized in 2018 and identifies opportunities for improving the environment and life quality for residents living in communities located along the river.<sup>7</sup> AB 530 required that the LLARRP be consistent with, and enhance, the County of Los Angeles's Master Plan for the entire Los Angeles River. The Plan also includes educational programs designed to help the communities along the river recognize its value, understand the importance of protecting its watershed resources, and appreciate its vitality to their communities. The LLARRP complies with the requirements of AB 530 by addressing the diverse needs of the river and its communities but does not directly require development of opportunity areas.

### **Los Angeles River Master Plan**

Los Angeles County is currently updating the Los Angeles (LA) River Master Plan, a comprehensive plan covering all 51 miles of the LA River. In October 2016, the Los Angeles County Board of Supervisors directed Public Works to work with other County Departments to update the LA River Master Plan for the first time in over 20 years since it was conceptualized in 1996. As part of this effort, the Department of Public Works, acting as Lead Agency, is preparing a Program Environmental Impact Report (PEIR) to evaluate any potential impacts to the environment pursuant to the CEQA.<sup>8</sup> The public review period for the Draft Program EIR ended on May 13, 2021.

The 2020 LA River Master Plan builds on the adopted 1996 Master Plan and other regional planning studies since then. It is intended to improve health, equity, access, mobility, and economic opportunity for the diverse communities of the County while still providing flood risk management. As described in the Plan, an analysis at site scale was used to determine how much impact each opportunity site could have on achieving the goals of the Master Plan. These potential opportunity sites were then used to fill in gaps where projects currently in development were not already meeting identified needs. The ultimate purpose of the Plan is to create multi-benefit projects that address many needs at a given site. However,

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7 Lower River LA, Lower LA River Revitalization Plan, <https://lowerlariver.org/>. Accessed November 2021.

8 Los Angeles County Public Works. Los Angeles River Master Plan: Program Environmental Impact Report. <https://pw.lacounty.gov/swq/peir/>. Accessed November 2021.

each site has specific conditions that will need to be evaluated on a project by project basis as sites are developed. This includes specific research on preservation of social fabric, historic resources, and community character.

#### **April 2021 City of Long Beach Park Acquisition Feasibility Report**

In February of 2021, the Long Beach City Council requested the City Manager to study the feasibility of acquiring open space for park development along the Los Angeles River consistent with the Long Beach RiverLink Plan and the Lower LA River Master Plan. The Park Acquisition Feasibility Report, completed in April 2021, identified properties that may be opportunity sites that could be further considered for possible acquisition, along with information on possible acquisition methods and funding sources that may be available for park acquisition.<sup>9</sup> The goal of this study was to identify areas within the western Long Beach that were most feasible to develop park space in order to improve park equity and increased quality of life for all residents. As the Park Acquisition Feasibility Report built upon the concepts of the RiverLink Plan, the Project site, as well as sites to the north and south along the east side of the river, were identified in the report.

## **4. ENVIRONMENTAL IMPACTS**

### **Thresholds of Significance**

The potential for the Project to result in impacts associated with land use and planning is based on the thresholds of significance derived from the Appendix G of the CEQA Guidelines. The first threshold in Appendix G, “Would the project physically divide an established community?,” was scoped out during the Initial Study process. As such the applicable threshold is::

**Threshold IV.J-1:            Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

## **5. METHODOLOGY**

The analysis of potential land use impacts considers consistency of the Project with adopted plans, policies, and ordinances that regulate land use on the Project Site, including the compatibility of proposed uses with surrounding land uses. The determination of consistency with applicable land use policies and ordinances is based upon a review of the previously identified planning documents that regulate land use or guide land use decisions pertaining to the Project Site. CEQA Guidelines Section 15125(d) requires an

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<sup>9</sup> City of Long Beach. Park Acquisition Feasibility Report. April 2021. <https://www.longbeach.gov/globalassets/city-manager/media-library/documents/memos-to-the-mayor-tabbed-file-list-folders/2021/april-5--2021---open-space-acquisition-study>. Accessed November 2021.

EIR to discuss inconsistencies with applicable plans and evaluate whether a Project is inconsistent with such plans. Projects are considered consistent with General Plan provisions, zoning ordinances and general SCAG policies if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The intent of the compatibility analysis is to determine whether the Project would be compatible with existing surrounding development in terms of land use, size, intensity, density, scale, and other physical and operational factors. The analysis addresses general land use relationships and urban form, based on a comparison of land use relationships in the area surrounding the Project Site under conditions existing at the time the Notice of Preparation (NOP) was published to those that would occur with Project implementation.

## 6. PROJECT IMPACTS

**Threshold IV.J-1: 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 proposed Project Site is located in an urbanized area with a General Plan designation for Founding and Contemporary Neighborhood (FCN). A development standards waiver for the height limitation to allow 3-story buildings in an area designated for 2-story buildings under the General Plan is requested by the Applicant in exchange for providing 5% affordable housing units onsite. The Project would offer 11 affordable housing units out of the proposed 226 units. The waiver is requested under the California Density Bonus Law, State of California Government Code Section 65915. As such, the proposed height would exceed the height limit indicated in General Plan Land Use Element. The additional height would be present in the proposed townhomes in the portion of the site close to Wardlow Road. Due to the lower existing grade, the resulting height would not be substantially greater than the heights of existing residences when viewed from within the Wrigley Heights neighborhood or than the multifamily residences on the south side of Wardlow Road. No identified scenic views would be obstructed by the third story on the townhomes close to Wardlow Road. As such, though the waiver would conflict with the height limit in the General Plan, it would not result in a significant environmental impact due to this conflict.

The following includes analysis based on the consistency of the proposed Project with applicable regional and local laws, regulations, plans, and guidelines adopted for the purpose of avoiding or mitigating an environmental effect.

**Regional**

**SCAG RTP/SCS Consistency**

**Table IV.J-1: SCAG RTP/SCS Consistency Analysis** provides an assessment of the Project’s consistency with 2020-2045 SCAG RTP/SCS goals. The analysis in these tables concludes that the proposed Project would be consistent with the applicable 2020-2045 RTP/SCS goals.

**Table IV.J-1  
SCAG RTP/SCS Consistency Analysis**

Goal	Consistency Analysis
<p><b>2:</b> Improve mobility, accessibility, reliability, and travel safety for people and goods.</p> <p><b>3:</b> Enhance the preservation, security, and resilience of the regional transportation system</p> <p><b>4:</b> Increase person and goods movement and travel choices within the transportation system.</p>	<p><b>Consistent.</b> The Project would be consistent with this goal as it is located within one mile of the Metro Rail A Line and would place residential development near multiple transit lines that could be used to travel to and from development centers and to other employment centers. The vehicular, public transit, bicycle, and pedestrian circulation improvements implemented as part of the proposed Project would meet the needs of local and regional transportation and ensure efficient mobility and access within the Project Site and surrounding area.</p> <p>Due to the proximity of the Wardlow Road exit, the I-710 northbound on-ramp were analyzed for potential freeway impacts. Based on trip distribution analysis, the Project would result in less than one percent increase in trips based on the freeway mainline capacity. Additionally, the I-405 southbound off-ramp was screened from further analysis due to a less than significant impact on LOS. Therefore, the Project would not inhibit regional vehicular transportation access. Furthermore, the Project would promote regional access via the Metro Rail A Line located less than one-mile from the Site.</p>
<p><b>5:</b> Reduce greenhouse gas emissions and improve air quality</p> <p><b>6:</b> Support healthy and equitable communities.</p>	<p><b>Consistent.</b> In the absence of any adopted, numeric threshold, the City evaluates the significance of the Project’s potential GHG emissions consistent with CEQA Guidelines section 15064.4(b)(2) which refer to applicable policies and/or regulations outlined in CARB’s Climate Change Scoping Plan, SCAG’s 2020-2045 RTP/SCS, the City’s Sustainable City Action Plan, or the City’s General Plan. The proposed Project would not conflict with any of the applicable</p>

Goal	Consistency Analysis
	<p>policies and/or regulations outlined in these plans and as such would not result in impacts related to direct and indirect emissions of GHG emissions. Consistent with regulatory requirements, the proposed Project would comply with applicable provisions of the California Green Building Standards Code. The goals of the Green Building standard include protecting occupant health, improving employee productivity, and using resources more efficiently while recuing the overall impact to the environment. Section 21.45.400.C.1.a requires new residential or mixed-use buildings of fifty (50) dwelling units and fifty thousand (50,000) gross sq. ft. or more to meet the intent of LEED at the certified level.</p>
<p><b>9:</b> Encourage development of diverse housing types in areas that are supported by multiple transportation options.</p>	<p><b>Consistent.</b> The Project includes 226 units consisting of 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units. Transit options are also numerous within the area of the Project Site with entrances to the I-710 and I-405 adjacent to the Site, the Metro Rail A Line within one-mile, multiple bus routes nearby, as well as bicycle lanes available within and adjacent to the Site.</p>
<p><b>10:</b> Promote conservation of natural and agricultural lands and restoration of habitats.</p>	<p><b>Consistent.</b> The Project would include development of a 5-acre park space to the north of the Project Site. This park space and recreational area would be open to the public and will contain amenities such as established walking trails, look-out points, an open grass area, a butterfly garden, and exercise equipment. The grass area would be sufficient in size for use as a soccer field or for other active sports activities. The sidewalks within the residential development would connect to the open space area trails, creating a seamless pedestrian connection between the residential complex and the recreational open space to the north. Additionally, trails and walkways would connect to the existing LA River bike and walking path which would promote exploration of the surrounding natural resources.</p>

Source: SCAG RTP/SCS 2020-2040, Connect SoCal, [https://scag.ca.gov/Sites/main/files/file-attachments/0903fconnectsocial-plan\\_0.pdf?1606001176](https://scag.ca.gov/Sites/main/files/file-attachments/0903fconnectsocial-plan_0.pdf?1606001176). Accessed November 2021.

Based on the preceding analysis, the Project would be consistent with the vision, goals, and policies of the 2020-2045 SCAG RTP/SCS. As such, impacts would be less than significant.

**Local**

**City of Long Beach General Plan**

The City’s General Plan sets forth the goals, policies, and directions the City will take in managing its future. It is the blueprint for development and a guide to achieving the long-term, citywide vision. The City’s General Plan sets seven interrelated goals:

**Table IV.J-2  
Long Beach General Plan Consistency Analysis**

General Plan Element	Consistency Analysis
<b>Land Use</b>	
<b>Policy</b>	
<p><b>LU 6-10:</b> Discourage fiscally draining land uses such as public storage, vacant lots, and outdoor storage.</p>	<p><b>Consistent.</b> The proposed Project would develop residential uses on an underdeveloped parcel that would include a range of attached and detached housing with the Long Beach Residential development standards and LBMC to assist the City in meeting the goals for housing production identified in the Housing Element of the General Plan. The Project would also provide affordable housing and market rate housing near employment centers which would encourage economic progress for the City.</p>
<p><b>LU 7-2:</b> Convert outdated and underutilized manufacturing and industrial Sites to Neo-Industrial uses, particularly those adjacent to residential areas.</p>	<p><b>Consistent.</b> As stated above, the Project would serve to utilize currently vacant land adjacent to an existing residential development. The existing Project Site contains remnants of the previous oil field water treatment facility, which would be remediated and redeveloped through the proposed Project to include a residential development and public park adjacent to the existing residential development.</p>
<p><b>LU 7-8:</b> Ensure infill development is compatible with surrounding established and planned uses.</p>	<p><b>Consistent.</b> The Project is consistent with this policy with regards to the architectural detail proposed in the Spanish Colonial Revival style architecture chosen for the Project’s homes, as well as the previously-described sensitivity to scale both within the Project and with the adjacent neighborhood. Development of the proposed Project would include visually attractive and high-quality development that is in scale, complements, and blends with the Wrigley Heights community and surrounding open space.</p>
<p><b>LU 11-2:</b> Provide for a wide variety of creative, affordable, sustainable land use solutions to help resolve air, soil and water pollution, energy consumption and resource depletion issues.</p>	<p><b>Consistent.</b> The Project would be consistent with this policy, as the Site is currently undergoing remediation since it was previously used for the treatment of oil field production brines, water, and wastewater as well as other fluid by-products generated by oil production activities. As such, remediation of the Project Site is</p>

General Plan Element	Consistency Analysis
	<p>would be completed by Project construction. Additionally, the LBMC requires certain types of development to meet LEED certificate standards, which include protecting occupant health, improving employee productivity, and using resources more efficiently while reducing the overall impact to the environment. Overall, the Project would provide a variety of solutions to reduce potential impacts on the environment and surrounding uses.</p>
<p><b>LU 11-5:</b> Ensure neighborhoods are accessible to open spaces, parks, trails, and recreational programs that encourage physical activity and walkability.</p>	<p><b>Consistent.</b> The Project is consistent with this policy with the inclusion of the approximately 5-acre public park space provided with the development of the Project. The park space would be maintained by the residential Homeowner’s Association (HOA) and available to the public. The park space trails would connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails to the east creating a flow with the surrounding uses. A looped trail is included in the active park area and would contain amenities such as parcourse exercise equipment, a look-out point, and a butterfly garden along the route. The center of the looped trail will include a turf area large enough to accommodate a youth soccer field.</p>
<p><b>LU 12-1:</b> Allow a variety of housing types in new residential developments with the goal of establishing new opportunities for persons of varied income ranges, ages, lifestyles, and family needs.</p>	<p><b>Consistent.</b> Development of the Project would be consistent with this policy by providing new, high quality housing located near a variety of transit options with the addition of nearby park space. The Project proposes 226 single-family units consisting of 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units. Included in the 226 units would be 11 designated affordable housing units. In addition to the development, a park space would be included providing approximately 5-acres for the existing residential development as well as the proposed Project. This would provide a variety of activities within walking distance of the development. Also, the Project Site has nearby access to the I-405 to the north, the I-710 to the west and LA Metro bus routes 60 and 2020, as well as the Metro Rail A line.</p>
<p><b>LU 12-4:</b> Allow new high-density residential growth to occur within Multi-Family neighborhoods in a manner that is context sensitive and compatible to surrounding uses and buildings and that provides a range of housing types and options that meets the needs of Long Beach residents.</p>	<p><b>Consistent.</b> The Project meets this policy through the use of appropriately-scaled development that is similar to the low-to-moderate density form of the development directly east of the Site and the neighborhood beyond. Residential uses are allowed within the current General Plan land use designation at a density of 7-18 dwelling units per acre (du/ac). The Project proposes a density of approximately 14.6 du/ac within the 15.5 acres proposed. The Project</p>

General Plan Element	Consistency Analysis
	further uses detached single-family homes, townhouses, and carriage/row houses, all with exterior entrances for each unit, to maintain a single-family-scaled design concept across the Project.
<p><b>LU 13-1:</b> Promote an equitable distribution of housing types for all income and various cultural groups throughout the City; avoid creating concentrations of below-market-rate housing in underserved and low-income neighborhoods.</p>	<p><b>Consistent.</b> The Project would be consistent with this policy through the inclusion of affordable housing within the development. By including affordable housing, the Project would promote a more equitable distribution of housing units within an area consisting of mainly market rate homes.</p>
<p><b>LU 16-3:</b> Locate sensitive land uses (e.g., residences, schools, and daycare centers) to avoid incompatibilities with recommended buffer distances identified in the most current version of the CARB Air Quality and Land Use Handbook: A Community Health Perspective (CARB Handbook). Sensitive land uses that are within the recommended buffer distances listed in the CARB Handbook shall provide enhanced filtration units or submit a Health Risk Assessment (HRA) to the City. If the HRA shows that the Project would exceed the applicable thresholds, mitigation measures capable of reducing potential impacts to an acceptable level must be identified and approved by the City.</p>	<p><b>Consistent.</b> The Project is consistent with this policy since development of residential uses on the Project Site would be compatible with the existing surrounding park and residential uses. Construction of the Project could expose sensitive receptors to elevated pollutant concentrations, but these would be minimized with implementation of <b>MM AQ-1</b>. Operation of the Project could also expose sensitive receptors (proposed Project residents) to increase air quality hazards due to the proximity of the freeways and major roads nearby. The proposed building features internal (no window units) filtration and climate control systems to minimize the effects of air quality hazards. Also, in the event exterior cooling systems are utilized, <b>MM AQ-2</b> would incorporate design features such as HVAC systems that utilize Minimum Efficiency Reporting Value (MERV) 14 or higher to reduce potential cancer risks. Additionally, an HRA was completed for the Project and determined that with the inclusion of these mitigation measures and Project design features, the proposed Project would not exceed applicable thresholds.</p>
<p><b>LU 16-14:</b> When residential or other sensitive land uses are proposed within proximity to freeways or the Port, use the discretionary review process to impose Site plan and design features aimed at minimizing exposure to environmental pollution. For example, locate balconies, outdoor amenity spaces, and when possible occupied portions of buildings as far from the pollution source as a particular Site will allow, and require the planting of vegetation and landscape buffering as appropriate.</p>	<p><b>Consistent.</b> As stated above, the Project would be consistent with this policy due to the proposed design features that limit residential exposure to particulate matter and other air quality hazards through enhanced filtration systems and higher tiered construction equipment requirements.</p>
<p><b>LU 18-1:</b> Require that new development creatively and effectively integrates private open spaces into Project design, both as green spaces and landscaped courtyards.</p>	<p><b>Consistent.</b> The Project is consistent with this policy through the inclusion of approximately 5-acres of park space located just north of the Project Site on the adjacent parcel and additional landscaping throughout the residential development. The park space would be designed to connect to the pedestrian paths within the residential complex, the adjacent public sidewalks, and the existing Baker Street Park trails to the east of the proposed park space, providing</p>

General Plan Element	Consistency Analysis
<p><b>LU 18-4:</b> Increase the number of trees, first prioritizing areas identified as tree deficient, to provide the maximum benefits of improved air quality, increased carbon dioxide sequestration, reduced stormwater runoff and mitigated urban heat island effect.</p>	<p>a variety of thoughtful landscaping as well including drought tolerant and native species.</p> <p><b>Consistent.</b> Landscaping for the proposed Project would be consistent with this policy. The residential development area would include approximately 4.36 acres of landscaping with approximately 375 trees planted throughout the development area. Vegetation within the condominium area would also utilize climate appropriate plants that are suitable to the Mediterranean climate. The proposed park space would also include climate appropriate plants suitable to the California’s Mediterranean climate. In combination, the residential and open space areas would provide approximately 9.17 acres of landscaped area and open space, with an estimated total of 520 trees planted. Any on Site trees or street trees removed during construction would be replaced in accordance with the City’s Tree Maintenance Policy, LBMC Chapter 14.28 pertaining to street trees, and other applicable City requirements. Landscaping would provide additional shade, drainage, and carbon dioxide sequestration to the Project Site.</p>
<p><b>LU 18-8:</b> Pursue resources to clean up land that could safely be used for public recreation.</p>	<p><b>Consistent.</b> The Project would be consistent with this policy through remediation and development of the proposed public park space. As previously described, the existing Project Site is undergoing soil remediation due to previous oil production uses. The north parcel proposed for the public park space is also undergoing remediation and containment of existing contamination is proposed through placement of an Engineered Cap. The Engineered Cap would eliminate the exposure pathway of COCs that remain on-Site.</p>

**Housing**

**Policy**

<p><b>H 4.2:</b> Encourage a balance of rental and homeownership opportunities, including high quality apartments, townhomes, condominiums, and single-family homes to accommodate the housing needs of all socioeconomic segments of the community, including large families.</p>	<p><b>Consistent.</b> The proposed Project would be consistent with this policy through the development of 226 high quality, detached and attached units for sale at market price as well as available affordable housing units. The Project consists of 74 detached single-family condominium units, 99 attached townhouse units, and 53 attached condominium units. The various housing types would provide a variety of affordable and market price options for residents with a wide range of family sizes.</p>
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<p><b>H 4.5:</b> Encourage residential development along transit corridors, in the downtown and close to employment, transportation and activity centers; and encourage infill and mixed-use developments in designated districts.</p>	<p><b>Consistent.</b> The Project would be consistent with this policy since it is less than a mile away from an existing transit corridor and retail/employment centers and is considered an in-fill Project.</p>
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General Plan Element	Consistency Analysis
<b>Mobility</b>	
<b>Strategies – Mobility of People</b>	
<p><b>MOP 1-1:</b> To improve the performance and visual appearance of Long Beach’s streets, design streets holistically using the “complete streets approach” which considers walking, those with mobility constraints, bicyclists, public transit users, and various other modes of mobility in parallel.</p>	<p><b>Consistent.</b> The proposed Project is consistent with this policy through design features that are intended to minimize impacts to the public right-of-way and enhance the user experience by integrating multimodal transportation options which aligns with the Strategies of the Mobility Element, including on-Site pedestrian infrastructure and trails to the approximately 5-acres of dedicated park space north of the developed Site area. Design and implementation of corridor improvements is proposed on Wardlow Road between Long Beach Boulevard and Cherry Avenue, including freeway ramp access configuration, sidewalk improvements, and signal system upgrades.</p>
<p><b>MOP 2-2:</b> Design the character and scale of the street to support its street type and place-type designation and overlay networks (for example, create a bike boulevard or bicycle-friendly retail district, transit street, or green street).</p>	<p><b>Consistent.</b> The Project is consistent with this policy through Project design features and access improvements that connect the Site to the surrounding uses and public ROWs. The Project includes internal sidewalk infrastructure for pedestrians, along with connectivity to Wardlow Road and Golden Avenue. Additionally, on-Site bicycle parking would be provided to encourage active transportation.</p>
<p><b>MOP 2-12:</b> Identify and analyze roadways where it may be possible to preserve the level of service while eliminating a vehicle travel lane to create a bike lane, or adding width to the curb lane for a new or improved bike lane.</p>	<p><b>Consistent.</b> The proposed Project would not alter external roadways but would be consistent with this policy as the residential development includes bicycle parking and facilities on-Site for current use as well as designed pathways within the development for bicycle connectivity with the existing LA River bike path to the west. The proposed Project would also be designed to encourage pedestrian and bicycle activity because it concentrates the development near public transit, which provides residents and visitors access to the Site that can be conveniently accessed by walking, biking, or taking transit. A bikeway is proposed adjacent to the Project Site to the south along Wardlow Road, which has been included in the proposed Project development bicycle connectivity design.</p>
<p><b>MOP 2-15:</b> Ensure that all new development is consistent with the applicable provisions of the Bicycle Master Plan.</p>	<p><b>Consistent.</b> See Table IV.J-2: Bicycle Master Plan Consistency Analysis below.</p>
<p><b>MOP 2-19:</b> Where feasible, widen sidewalks to improve the pedestrian environment by providing space for necessary infrastructure, amenities, and streetscape improvements.</p>	<p><b>Consistent.</b> As stated above, the Project would be consistent with this policy through the implementation of corridor improvements such as sidewalk extensions/connections and by providing bicycle facilities and parking on-site in preparation for</p>

General Plan Element	Consistency Analysis
	future City planned bicycle facilities within the vicinity of the proposed Project.
<b>Urban Design</b>	
<b>Policy</b>	
<b>UD 19-1:</b> Encourage new construction, additions, renovations, and infill development to be sensitive to established neighborhood context, historic development patterns, and building form and scale.	<b>Consistent.</b> The Project is consistent with this policy with the implementation of Spanish Colonial Revival style architecture in the Project design. The proposed Project is considered infill as the existing Site includes vacant land as well as remnants of the previous oil processing facility. Design of the residential units would also include similar form and scale as the existing residential development.
<b>UD 19-2:</b> Ensure that Project Site design and function minimizes the potential adverse impacts of vehicle access, parking and loading facilities, signage, lighting, trash enclosures, and sound systems.	<b>Consistent.</b> The Project meets this policy through its adequate Site circulation design, provision for sufficient resident and guest parking, and the signalization of the Project driveway with Wardlow Rd. Additionally the Project is adjacent to the local bus routes serving Wardlow Rd., as well as being less than a half-mile walk or bicycle ride to the Wardlow Station of the Metro Rail A Line light rail system. Trash receptacles will be provided within the garage spaces of each unit, and all Project lighting will be designed to full-cutoff lighting standards. No exterior sound systems are planned.
<b>UD 19-3:</b> Support new development that is designed to respect the height, massing, and open space characteristics of the existing neighborhood while creating the appearance of single-family units for multifamily buildings to allow for better integration.	<b>Consistent.</b> The Project meets this policy through the use of appropriately-scaled development that is similar to the low-to-moderate density form of the development directly east of the Site and the neighborhood beyond. The Project further uses detached single-family homes, townhouses, and carriage/row houses, all with exterior entrances for each unit, to maintain a single-family-scaled design concept across the Project.
<b>UD 19-4:</b> Promote the uniqueness of each neighborhood through preservation of mature trees, historic structures, fine-grained architectural detail, appropriate building scale, and cultural amenities that are key to the neighborhood’s identity and help create a uniform streetscape.	<b>Consistent.</b> The Project meets this policy with regards to the architectural detail proposed in the Spanish Colonial Revival style architecture chosen for the Project’s homes, as well as the previously-described sensitivity to scale both within the Project and with the adjacent neighborhood. The Project additionally will provide a new approximately 5-acre park as a neighborhood amenity available to both residents and the general public. There are no significant mature trees (see Biological Resources Constraints Study in Project EIR file) and no historic structures or buildings on the Site.
<b>UD 19-5:</b> Provide shade trees to match the existing species to reinforce neighborhood identity, to add greenspace for texture, shade, and overall visual character, and to create a uniform streetscape. Maintain	<b>Consistent.</b> The Project meets this policy through a complete landscaping plan and concept that will be installed as the Project units are built, which will include broad-canopy leafy shade trees both within

General Plan Element	Consistency Analysis
<p>consistent wall and fence treatment along the street edge.</p>	<p>the yard area of each private unit, on common private streets within the development, and as public trees on adjacent public streets. Trees will use a consistent species palette and will comport with public tree plans for the public streets. Consistent design of fences and walls throughout the development and especially on its perimeter will be required.</p>
<p><b>UD 19-6:</b> Encourage the use of appropriately sized, landscaped roundabouts in concert with other traffic calming measures to create a pedestrian-friendly, safe environment.</p>	<p><b>Consistent.</b> The Project meets this policy through its multiple improvements to streets, sidewalks, and intersections within and adjacent to the Project Site, with a primary focus on safety and walkability; however, there are no opportunities for traffic roundabouts or other typical calming measures such as speed humps or bulb-outs.</p>
<p><b>UD 19-8:</b> Provide better connections to these neighborhoods by improving bikeways and pedestrian paths, especially along the arterial streets. Capture opportunity for pedestrian paths to improve walkability (e.g., utility easement, vacant parcels).</p>	<p><b>Consistent.</b> The Project meets this policy through improvements to public sidewalks adjacent to the Project Site as well as a consistent, connected, and complete sidewalk system within the Project itself. Additional off-Site improvements will be made to a section of Wardlow Rd. between the Project driveway and the Wardlow Rd. bridge over the Los Angeles River, where the developer will be required to construct a public sidewalk where none currently exists.</p>
<p><b>UD 19-11:</b> Ensure access to local serving commercial retail (i.e., dining, coffeehouses) at the periphery to serve residents.</p>	<p><b>Consistent.</b> The nearest commercial retail area is located at the intersection of Wardlow Rd. and Pacific Pl., which is approximately one-third of a mile from the Project Site. This is well within convenient bicycling distance and marginally within convenient walking distance. Project improvements to public sidewalks on Wardlow Rd. will make this distance more convenient to traverse for non-automobile travelers.</p>
<p><b>UD 21-2:</b> Encourage gateway elements that help define neighborhood edges and provide transitions into center development along lengthy corridors.</p>	<p><b>Consistent.</b> The Project would be consistent with this policy with the inclusion of similar low-density residential housing as seen by the existing neighborhood and would reference existing development to create compatible architectural design of the proposed homes.</p>
<p><b>UD 21-3:</b> Promote pedestrian activity by establishing well-designed streetscapes, active ground floor uses, and tree-canopied sidewalks, which are unique to the individual neighborhood and transit stations.</p>	<p><b>Consistent.</b> The Project would be consistent with this policy through the addition of pedestrian sidewalks connecting the Project Site to surrounding uses in addition to enhanced landscaping throughout the Project Site. The proposed Project would also accommodate pedestrian activity with its access locations and park space, which would be designed to City standards to provide adequate sight distance and pedestrian movement controls that would meet the City's requirements to protect pedestrian safety.</p>

General Plan Element	Consistency Analysis
	Vegetation within the development and throughout the pedestrian walkways/sidewalks would consist of drought tolerant shade trees for safe and comfortable movement throughout.
<b>UD 21-4:</b> Ensure signing, lighting and other potential nuisances are selected with a sensitivity to existing residential neighbors.	<b>Consistent.</b> The proposed Project is consistent with this policy as it would include lighting throughout the residential development area and to the exterior of the development area for security, wayfinding, and entryway lighting along development access points.
<b>UD 21-6:</b> Provide neighborhood serving uses, parks, and transit connections within a ¼-mile radius of a neighborhood-Serving Centers and corridors – Low and moderate PlaceTypes.	<b>Consistent.</b> As stated previously, the Project would include an approximately 5-acre public park space to the north of the development, which would be consistent with this policy. Also, the Site would incorporate access to the LA River by walking, bicycling, or horseback for recreational use.
<b>UD 21-7:</b> Provide courtyards, paseos, and public plazas that provide needed open space and encourage walking and socializing at the heart of a neighborhood - serving center or transit station. Provide adequate open space as density increases.	<b>Consistent.</b> The Project would provide approximately 5-acres of publicly available park space sufficient for the proposed residential which would be consistent with this policy. Also, pedestrian access would be provided throughout the development with landscaping lining each walkway to promote pedestrian movement.
<b>UD 21-8:</b> Provide access to parking/loading from alleys or side-streets to minimize curb cuts along the main boulevard where pedestrian activity will be heaviest. Require a well-designed interface between pedestrians, bicyclists, and transit users. Bicycle facilities and pedestrian amenities should be integrated throughout the PlaceType.	<b>Consistent.</b> The Project would be consistent with this policy with approximately 4-acres set aside for streets and parking areas within the complex, including 452 off-street garage parking spaces, and 59 guest parking spaces. Bicycle facilities would be provided on-Site and trails are included which would be segregated from vehicle traffic, which connect with supporting commercial, recreational, and other public facilities.
<b>UD 35-7:</b> Monolithic structures that appear as a massive wall, block views, or overshadow the surrounding neighborhood, should be avoided.	<b>Consistent.</b> The Project would be consistent with this policy as it includes architectural styles that are unique and also complement the surrounding development and avoid monolithic type architecture.

Source: City of Long Beach General Plan 2040.

Based on the preceding analysis, the proposed Project would be consistent with the vision, goals, and policies of the City’s adopted General Plan, including those of the Land Use, Housing, Mobility and Urban Design Elements. As such, impacts would be less than significant.

### Long Beach Zoning Regulations

The existing zoning on Site is Commercial Storage (CS) and Single-Family Residential Standard Lot (R-1-N) with a Horse (H) Overlay District over a portion of the Project Site. The CS zone allows for commercial land

use consisting of the consisting of the rental of space for the storage of personal property, such as mini-warehouse and the storage of recreational vehicles.<sup>10</sup> The R-1- N district is a single-family residential district with standard lots.<sup>11</sup> The H Overlay District modifies the underlying zoning to allow for the keeping of horses and horse related facilities on private properties in the City and outlines the requirements and standards for horse keeping, including definition of the number of horses allowed in different zones.<sup>12</sup> No horse facilities or trails are present or are proposed for that portion of the site that is within the H Overlay District. A zone change to Residential Planned Unit Development (PUD) is proposed. The Residential PUD zone allows greater flexibility in development standards to encourage innovative and creative design though good urban planning principals, with efficient use of land, a mixture of densities, and diverse housing opportunities and on-Site community facilities. The development standards of a PUD are defined in Chapter 21.31 of the City's zoning code. A PUD is required to have a minimum site are of 5 acres, be internally integrated and connected and provide a minimum of 15% of the site as usable open space. In addition, minimum building setbacks, maximum height, minimum open space, street and sidewalk width, and other dimensional standards are established in Table 31-8 of Chapter 21.31. The Project has been designed to be consistent with the design standards and intent of the PUD zone.

Based on this analysis, the proposed Project would be consistent with the City's Zoning Regulations and would change the existing zoning of the Project Site to be consistent with the proposed Project. Therefore, impacts related to consistency with the zoning regulations would be less than significant.

### ***Other Plans and Studies***

As presented in *Section 3: Regulatory Setting*, A series of studies have been prepared since 1996 addressing the Los Angeles River and planning for parks in the City of Long Beach that relate to the proposed Project and Project Site including:

- Long Beach River Link Plan (2007)
- Lower LA River Revitalization Plan (2018)
- The Los Angeles River Master Plan (1996 adopted, 2020 draft update)
- City of Long Beach Park Acquisition Feasibility Report (2021)

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10 City of Long Beach, Long Beach Municipal Code, Chapter 21.32- Commercial Districts, [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.32CODI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.32CODI). Accessed November 2021.

11 City of Long Beach. Long Beach Municipal Code. Chapter 21.31- Residential Districts. [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.31REDI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.31REDI). Accessed November 2021.

12 City of Long Beach. Long Beach Municipal Code. Chapter 21.38- Horse Overlay District. [https://library.municode.com/ca/long\\_beach/codes/municipal\\_code?nodeId=TIT21ZO\\_CH21.38HOOVDI](https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT21ZO_CH21.38HOOVDI). Accessed November 2021.

A description of each of these plans and studies and their relationship to the Site is provided below. These planning studies are not land use regulatory documents and, for this reason, the Project is not required to comply with these plans and studies.

### **Long Beach RiverLink Plan**

The City's 2007 RiverLink Plan provided guidance and recommendations for open space planning by the City and led to the Park Acquisition Feasibility Report, described below. Destination 7, as identified in the Long Beach RiverLink Plan, identifies the Project Site as "Wrigley Heights – South" as a potential location for open space/parks along the river corridor. Regarding the area including the Project Site, the RiverLink Plan identifies this location as suitable as open space destination including public amenities such as pedestrian and bicycle paths, and a neighborhood park with a playground, and picnic areas.

The Project would not conflict with the Long Beach RiverLink Plan. The proposed Project includes an approximately 5-acre park to the north of the proposed residential development, which includes connected pathways to the surrounding parks. The Project would also include connections to the existing bicycle, pedestrian, and horse path that runs along the LA River. Additional public amenities are proposed in this 5 acre open space area that may include a youth soccer field, walking trails, look-out points, a butterfly garden, and exercise equipment. Landscaping would include various shrubs and five different types of trees (California Sycamore, Chitalpa, Black Elder, Coast Live Oak, and Torrey Pine). Connection with the existing Baker St. Park would be provided so as to establish continuity between these open space features. These features of the Project are consistent with the RiverLink Plan. As 25% of the Project site is dedicated as a public park in perpetuity and also incorporates most of the RiverLink suggested recreational components, the Project serves to implement the open space destination as envisioned in the RiverLink Plan.

### **Lower LA River Revitalization Plan**

As described above, the Lower LA River Revitalization Plan (LLARRP) identifies opportunities for improving the environment and residents' quality of life along the river. The long-term vision defined in the Lower LA River Revitalization Plan (LLARRP) includes restoring a continuous, functioning riparian ecosystem along the Los Angeles River Corridor. A major element of reconnecting neighborhoods to the Los Angeles River identified in the Plan is the transformation of the river corridor into a continuous River Greenway that functions as the "green spine" of the City. Safe, pedestrian-friendly connections to the Greenway can be provided via a system of arterial and local "green streets" that are bicycle- and pedestrian-friendly, and paseos with wide sidewalks and shady tree canopies. This Plan identifies "Opportunity Areas" along the Los Angeles River corridor to illustrate what might be feasible through implementation of various Los Angeles River improvement scenarios.

The proposed Project would not conflict with the goals and policies identified in the LLARRP. The Project Site is included in the Wrigley Heights River Park Opportunity Area as the “Wrigley Heights River Park South” site. The LLARRP identifies several configurations for the Wrigley Heights River Park Opportunity Area that include active and passive recreation features on the north and south sites. Cost estimates for these different configurations, including property acquisition and improvement costs range from \$55 to \$191 million.

As described above, the Project includes approximately 5-acres of public open space which would be connected to the surrounding City parks as well as the LA River pedestrian, bicycle, and horse paths. The Project would also include features such as a youth soccer field, native plant garden, and other amenities, consistent with the concepts identified in this plan.

### **Los Angeles River Master Plan**

The Los Angeles River Master Plan was originally approved by Los Angeles County in 1996. This plan expanded the originally single-purpose flood-management efforts on the river to a multi-benefit community amenity that reflected aesthetic, environmental, economic, and recreational values of local residents. In 2020, the County prepared a draft update of the LA River Master Plan. The 2020 Plan is intended to guide all LA County departments in decision making for LA River projects and facilities owned, operated, funded, permitted, and/or maintained by the County. Other agencies and municipalities are encouraged to adopt the LA River Master Plan for their jurisdictions and communities.

The LA River Master Plan identifies opportunity areas along the entire 51 mile river corridor where multi-benefit projects could be implemented that would be consistent with the objectives of the plan. Potential opportunity sites within one mile of the LA River were assessed. Out of 450 initial opportunity sites, ninety-eight parcels were deemed most viable for future projects. Known brownfield and superfund sites were eliminated, resulting in 78 opportunity sites being identified. This analysis considered the site identified in previous studies, including the Lower LA River Revitalization Plan.

The proposed Project site was identified in this Master Plan (as RM 4.4 Wrigley Heights River Park) due to the identification as an opportunity site in the Long Beach Riverlink Plan and the Lower LA River Revitalization Plan.

The Master Plan states that the implementation of projects on these opportunity sites would depend on many factors including, but not limited to, local community needs, policy decisions, timing of proposed implementation, and availability of funding. The Plan was developed to make the 51 miles of the river accessible and useful to the communities of LA County. While the Los Angeles River Master Plan provides

guidance and recommendation for open space planning it does not require identified sites to be developed with park space.

The proposed Project would not conflict with any of the goals identified in the LA River Master Plan. The approximately 5-acres of public open space and connected pathways included in the proposed Project would further the goal mentioned in the LA River Master Plan to make the LA River resources more accessible to the public. The sidewalks within the proposed residential development in the Project would connect to the park space area trails. Additionally, the Project would not conflict with or impede the open space trail along the river and would integrate the public ROW to the west in order to connect the Project's park space with the LA River pedestrian, bicycle, and horse paths. With the potential development of the northern parcel located north of I-405 and east of the Los Angeles River by the City as well as the proposed Project recreational features, the Project would not conflict with the intentions of the LA River Master Plan.

### **City of Long Beach Park Acquisition Feasibility Report**

This report identifies properties that may be opportunity sites that could be further considered for possible acquisition, along with information on possible acquisition methods and funding sources that may be available to acquire and improve these sites as parks. The Project Site, identified as "712 Baker Street", is specifically addressed in this report.

Between 2000-2010, the City pursued a variety of private properties for park acquisition, made possible through by a combination of City and Redevelopment Agency funds, county, state and federal grant funds, and Park Impact Fees. In 2000 the City began negotiating with the property owner(s) of the vacant site at 712 Baker Street. Initially, \$5 million in State grant funds were provided for a possible acquisition but were frozen by the State due to State budgetary issues, and ultimately never made available to the City. In 2003, the City secured a second \$5 million grant from the Rivers and Mountains Conservancy from the Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Bond of 2002 (Proposition 40) in 2003 to acquire the property. The value of the property was determined to be greater than the available amount of grant funds and the property was not acquired at that time. In 2016, the City estimates that the cost of acquisition could range from \$17 to \$22 million, with \$10 million needed for environmental clean-up. In 2017, the City engaged the Trust for Public Lands (TPL) to contact the property owner to discuss the potential for acquisition of the property. TPL concluded that the property owners were not willing sellers and the City was not able to begin any discussions with the property owners that would result in acquisition. For these reasons, the proposed Project Site was identified as a "site considered but not recommended" in the Acquisition Feasibility Report.

The report notes that an entitlement application was filed in June 2019 for the Proposed Project that included a Development Agreement which would obligate the developer to meet certain terms for the approximate 5 acres of public open space included in the Project including:

1. Design and development of the new park acreage with a nature theme and connecting it to the adjacent Baker Street Park so the area operates as a larger park space;
2. New amenities including a universally accessible/inclusive playground, half basketball court, grass playing field, walking loop with outdoor inclusive fitness equipment;
3. Drought-tolerant landscape and carbon sequestering trees and site furnishings like seating, lighting, and trash receptacles;
4. Interpretive and educational signage about the history of Long Beach's Indigenous People and their connection with the LA River; and
5. Designation of the public park and funding park maintenance in perpetuity.

Consistent with the RiverLink Plan, the Park Acquisition Feasibility Report identifies the Development Agreement associated with the Project as a mechanism to provide as much open space on the site as possible.

The Park Acquisition Feasibility Report identified a single site as most feasible for acquisition for development of a new park in the area, the 11-acre site located north of I-405 and the Project Site. This property met the criteria of institutional or utility property; is undeveloped, unused, and unencumbered; and the County is interested in making this property public open space. It is also directly accessible from the LA River Bike Trail.

The proposed Project would not conflict with the goals of the Park Acquisition Feasibility Report. The public park space proposed within the Project Site would be consistent with the goals of the Report by integrating sidewalks within the residential development with the park space area trails, creating a seamless pedestrian connection between the residential complex and the recreational park space to the north. Also, these pedestrian pathways would connect to the existing entrance to the LA River located to the west of the Project site within the pedestrian ROW.

The Project is also consistent with the terms of the development agreement. The 5-acres of active park space to the north of the Project Site, would introduce trails connecting to the existing Baker Street Park and the realigned Baker Street to be used by Long Beach's Public Works' Department for public facility maintenance. This park space and recreational area would be open to the public and contain established walking trails, look-out points, an open grass area, a butterfly garden, and exercise equipment. The grass area would be sufficient in size for use as a soccer field or for other active

sports activities. The sidewalks within the residential development would connect to the park space area trails, creating a seamless pedestrian connection between the residential complex and the recreational park space to the north. Vegetation included in the landscape design would fit into the overall character of the surrounding landscape. With the potential development of the northern parcel located north of I-405 and east of the Los Angeles River by the City as well as the proposed Project recreational features, the Project would not conflict with the intentions of the City of Long Beach Park Acquisition Feasibility Report.

Based on the above, the Project would not conflict with applicable land use plans, polices, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. As such, impacts would be less than significant.

## **7. CUMULATIVE IMPACTS**

Cumulative development in and around the Project area in accordance with the City's General Plan would incrementally modify land use patterns and the general setting of the area. As shown in Table 3-1 in Section 3.0, Environmental Setting, two other development Projects are planned. A four-story, mixed-use 35,000 square-foot office building is planned for 3435 Long Beach Boulevard, east of the Project. Additionally, a proposed self-storage and RV storage facility would be developed at 3701 Pacific Place. This related Project will construct a 150,000-gross-squarefoot building with 1,100 self-storage units and 580 RV storage spaces on the currently vacant property. Additionally, the City is looking to expand local recreational facilities within the vicinity of the proposed Project through construction of the Wrigley Greenbelt within County property immediately south of Wardlow Road. However, similar to the proposed Project, land use and policy consistency impacts associated with individual Projects can be addressed on a case-by-case basis and cumulative significant impacts would not occur.

Additionally, a site was identified in the Park Acquisition Feasibility Report located near the Project Site, which would, if developed, further the goals and objectives of the LA River Master Plan, RiverLink Plan, and the LLARRP. The 11-acre site located north of I-405 and the Project Site is currently owned by Los Angeles County. The City is planning to work with the County to develop the 11 acres site into a public park.<sup>13</sup> The County has halted any other plans for this property and the City has begun examining potential funding sources, which could include grants and support from other State and

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13 City of Long Beach. Park Acquisition Feasibility Report. April 2021. <https://www.longbeach.gov/globalassets/city-manager/media-library/documents/memos-to-the-mayor-tabbed-file-list-folders/2021/april-5--2021---open-space-acquisition-study>. Accessed November 2021.

Federal sources. This expansion of City park facilities would be consistent with the proposed River Link Report (identified as Destination 6: Wrigley Heights North).<sup>14</sup>

Moreover, because the Project's impacts related to land use compatibility and consistency with adopted local plans and goals would be less than significant (as discussed above), the Project's contribution to cumulative land use impacts would not be cumulatively considerable.

## **8. MITIGATION MEASURES**

The proposed Project would have a less than significant impact on land use and planning. Therefore, no mitigation measures would be required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed Project would have a less than significant impact on land use and planning. Therefore, no mitigation measures would be required.

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14 City of Long Beach, Department of Parks, Recreation and Marine, Long Beach RiverLink. February 2007.

### 1. INTRODUCTION

This section of the Draft EIR analyzes the potential noise and vibration impacts associated with the proposed Project. Specifically, the analysis describes the existing noise environment within the proposed Project area, estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the proposed Project, identifies the potential for impacts, and provides mitigation measures to address any significant impacts. In addition, evaluation of the potential cumulative noise and vibration impacts resulting from the proposed Project together with related projects and future growth are also provided. Noise calculation worksheets are included in **Appendix IV.K** of this Draft EIR.

### 2. ENVIRONMENTAL SETTING

#### Fundamentals of Sound

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters that describe the physical properties of sound waves. These properties include the rate of oscillation (frequency); the distance between successive troughs or crests, the speed of propagation; and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The unit of sound pressure expressed as a ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Decibels provide a logarithmic loudness scale (similar to the Richter scale used for earthquake magnitudes), which is used to keep sound intensity numbers at a convenient and manageable range. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called “A weighting,” written as dBA. Further reference to decibels in this analysis should be understood to be A-weighted.

Several noise descriptors have been developed to evaluate the adverse effect of community noise on people. Since noise level fluctuates over time, an equivalent sound level (Leq) descriptor is used to describe typical time-varying instantaneous noise. Finally, because community receptors are more sensitive to unwanted noise intrusion during evening and nighttime hours, State law requires that an artificial decibel increment be added to noise occurring during those time periods. The 24-hour noise descriptor with a specified evening (7:00 PM to 10:00 PM) and nighttime (10:00 PM to 7:00 AM) penalty is called the Community Noise Equivalent Level (CNEL).

Noise sources can generally be categorized as one of two types: (1) point sources, such as stationary mechanical equipment; and (2) line sources, such as a roadway. Sound generated by a point source

typically diminishes (attenuates) at a rate of 6 dBA for each doubling of distance from the source to the receptor at acoustically hard sites, and at a rate of 7.5 dBA at acoustically soft sites.<sup>1</sup> A hard or reflective site consists of asphalt, concrete, or very hard-packed soil, which does not provide any excess ground-effect attenuation. An acoustically soft or absorptive site is characteristic of normal earth and most ground with vegetation. As an example, a 60-dBA noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dBA at 100 feet from the source and 48 dBA at 200 feet from the source. Noise from the same point source at an acoustically soft site would be 52.5 dBA at 100 feet and 45 dBA at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling of distance from the source to the receptor for hard and soft sites, respectively.<sup>2</sup>

Different types of scales are used to characterize the time-varying nature of sound. Applicable scales include the maximum noise level (L<sub>max</sub>), Leq, and the CNEL. L<sub>max</sub> is the maximum noise level measured during a specified period. Leq is the average A-weighted sound level measured over a given time interval. Leq can be measured over any period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is an average A-weighted sound level measured over a 24-hour period. However, this noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained by adding 5 dBA to sound levels occurring during the evening, from 7:00 PM to 10:00 PM, and 10 dBA to sound levels occurring during the nighttime, from 10:00 PM to 7:00 AM. The 5 dBA and 10 dBA "penalties" are applied to account for increased noise sensitivity during the evening and nighttime hours. Day-night average level (L<sub>dn</sub>) is the A-weighted equivalent sound level for a 24-hour period with an additional 10 dBA imposed on the equivalent sound levels for nighttime hours of 10:00 PM to 7:00 AM. **Table IV.K-1: Noise Descriptors** identifies various noise descriptors developed to measure sound levels over different periods of time.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receiver and the noise source reduces the noise level by about 5 dBA, whereas a solid wall or berm reduces noise levels by 5 to 10 dBA.<sup>3</sup> In addition, noise is substantially reduced from outdoor to indoor areas as a result of structural designs that attenuate noise. Windows are a common feature used by building occupants to control the effects of outdoor noise on interior noise levels. The exterior-to-interior reduction of noise for newer residential units is generally 20 dBA or more with the windows in a closed position. The minimum attenuation of exterior-to-interior noise provided by typical structures is provided in **Table IV.K-2: Outside-to-Inside Noise Attenuation**.

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1 USDOT FHWA, *Fundamentals and Abatement*, 97.  
 2 USDOT FHWA, *Fundamentals and Abatement*, 97.  
 3 USDOT FHWA, *Highway Noise Fundamentals* (1980), 18.

**Table IV.K-1  
Noise Descriptors**

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measure sound to a reference pressure.
A-weighted decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent sound level (Leq)	The sound level containing the same total energy as a time-varying signal over a given time period. The Leq is the value that expresses the time-averaged total energy of a fluctuating sound level. Leq can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods.
Community noise equivalent level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments add 5 dBA for the evening (7:00 PM to 10:00 PM) and add 10 dBA for the night (10:00 PM to 7:00 AM). The 5 and 10 dBA penalties are applied to account for increased noise sensitivity during the evening and nighttime hours. The logarithmic effect of adding these penalties to the 1-hour Leq measurements typically results in a CNEL measurement that is within approximately 3 dBA of the peak-hour Leq. <sup>a</sup>
Sound pressure level	Force of sound on a surface area perpendicular to the direction of the sound. Sound pressure level is expressed in decibels.
Ambient noise	The level of noise that is all encompassing within a given environment, being usually a composite of sounds from many and varied sources near to and far from the observer. No specific source is identified in the ambient environment.

<sup>a</sup> California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol (Sacramento, California: September 2013)*.

**Table IV.K-2  
Outside-to-Inside Noise Attenuation**

Building Type	Reduction in dBA	
	Open Windows	Closed Windows <sup>a</sup>
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Convalescent homes	17	25
Offices	17	25

Source: Bolt Beranek and Newman, Inc., *Highway Noise: A Design Guide for Highway Engineers*, NCHRP Report No. 117, (1971). Prepared for Highway Research Board, National Academy of Sciences, Washington, D.C.

<sup>a</sup> As shown, structures with closed windows can attenuate exterior noise by a minimum of 25.0 to 30.0 dBA.

## Fundamentals of Vibration

Vibration is commonly defined as an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) or the root-mean-square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is typically used for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response to ground-borne vibration. The RMS vibration velocity level can be presented in inches per second (ips) or in vibration decibels (VdB, a decibel unit referenced to 1 microinch per second). Generally, ground-borne vibration generated by man-made activities (e.g., road traffic, construction activity) attenuates rapidly with distance from the source of the vibration.

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.<sup>4</sup> Most perceptible indoor vibration is caused by sources within buildings such as the operation of mechanical equipment, the movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is barely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity, to 100 VdB, which is the threshold where minor damage can occur in fragile buildings.

## Existing Conditions

### *Ambient Noise Levels*

As defined in the City's Draft General Plan, the ambient noise within the City generates from several sources. Mobility sources, including vehicular traffic, aircraft, and watercraft, contribute to the daily transportation-related noise in the City. Another noise source is special events, which occur on a periodic basis. The last category of noise sources is construction and nuisance noises, which include machinery, heating, ventilation and air conditioning systems, compressors, and landscape maintenance equipment, among others. Commercial, commercial-industrial, light-industrial, and to a lesser extent residential land uses in the City have the potential to generate high noise levels and impact surrounding land uses with their equipment operation. Noise sources from these land uses include air conditioning or refrigeration units, power tools, lawn equipment, generators, and other powered mechanical equipment. Additionally,

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4 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018, 7-8.

activities that are not necessarily “stationary” include parking lot activities, truck deliveries, and events are oftentimes classified in the same categories.

Short-term sound monitoring was conducted at seven (7) locations on and within the vicinity of the Project Site to measure the ambient sound environment. Measurements were taken over 15-minute intervals at each location between the hours of 12:08 PM and 3:13 PM on February 3, 2021. As shown in **Table IV.K-3: Existing Noise Measurements** ambient noise levels ranged from a low of 52.4 dBA (Leq-15minute) south of the Project Site on the corner of De Forest Avenue and 34th Street (Site 4) to a high of 71.7 dBA (Leq-15minute) southeast of Project Site along Golden Avenue (Site 5). Monitoring locations are provided in **Figure IV.K-1: Common Noise Levels** and **Figure IV.K-2: Noise Monitoring Locations**.

**Table IV.K-3**  
**Existing Noise Measurements**

Location	Number/Description	Nearest Use	Time Period	Noise Source	dBA Leq (15-minute)
1	Northwest area of Project Site	Project Site	12:08 PM– 12:23 PM	Traffic along the I-405 and I-710 Freeway	55.9
2	Park north of Baker Street	Park	12:47 PM– 1:02 PM	Traffic along I-405 off-ramp	60.1
3	East of the Project Site along Golden Avenue	Residential	1:16 PM– 1:31 PM	Pedestrian and low traffic along Golden Avenue	59.0
4	Corner of De Forest Avenue and 34th Street	Residential	2:09 PM– 2:24 PM	Pedestrian and low traffic along Wardlow Road	52.4
5	Southeast of Project Site along Golden Avenue	Residential	1:40 PM– 1:55 PM	Pedestrian and traffic along Wardlow Road	71.7
6	West of Project Site along Gale Avenue (south)	Residential	2:38 PM– 2:53 PM	Residential activity along Gale Avenue and traffic along Wardlow Road on-ramp	61.9
7	West of Project Site along Gale Avenue (north)	Residential	2:58 PM– 3:13 PM	Residential activity along Gale Avenue and Baker Street	62.3

Source: Refer to **Appendix 4.K.1** for noise monitoring data sheets.

Notes: dBA = A-weighted decibels; Leq = average equivalent sound level.

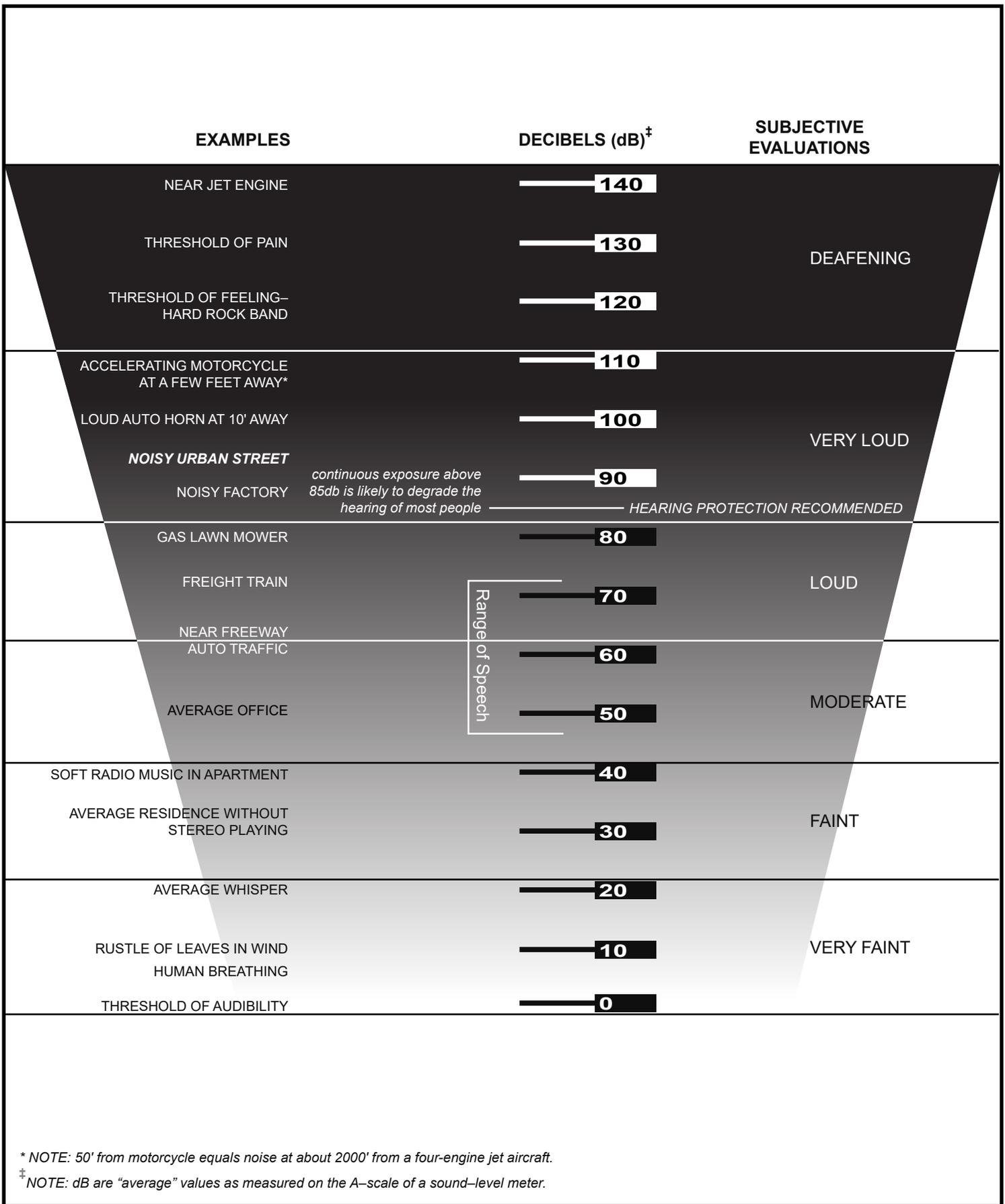


FIGURE IV.K-1





North



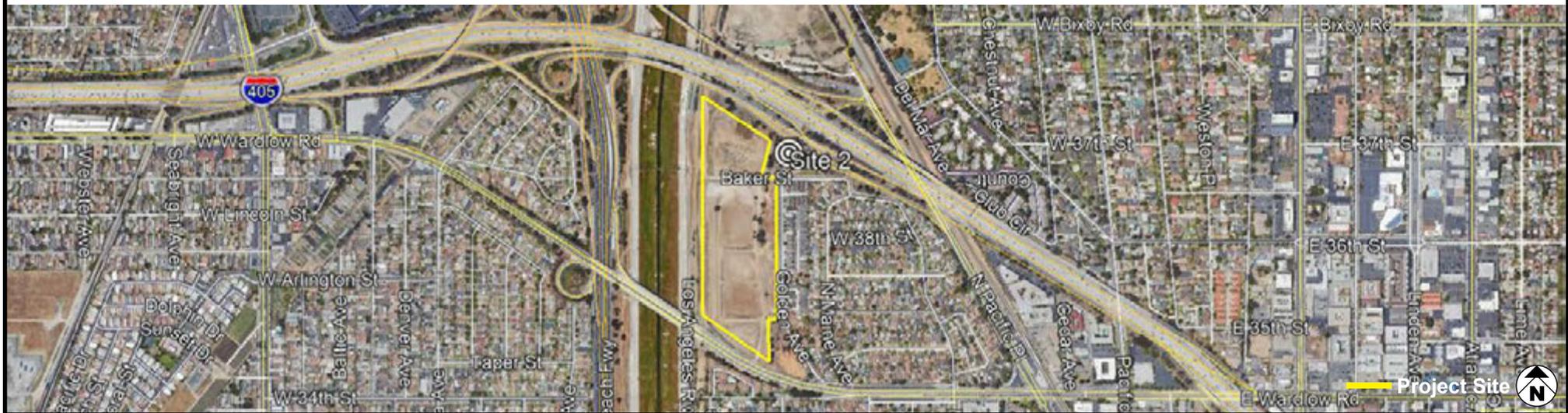
West



South



East



SOURCE: Google Earth - 2021

FIGURE IV.K-2b



North



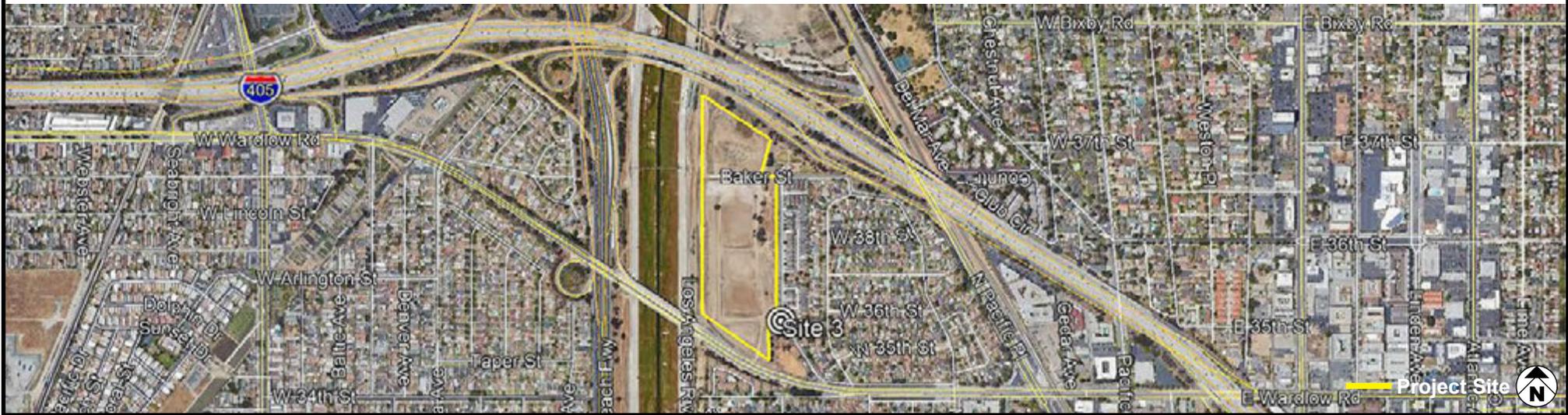
West



South



East



SOURCE: Google Earth - 2021

FIGURE IV.K-2c



North



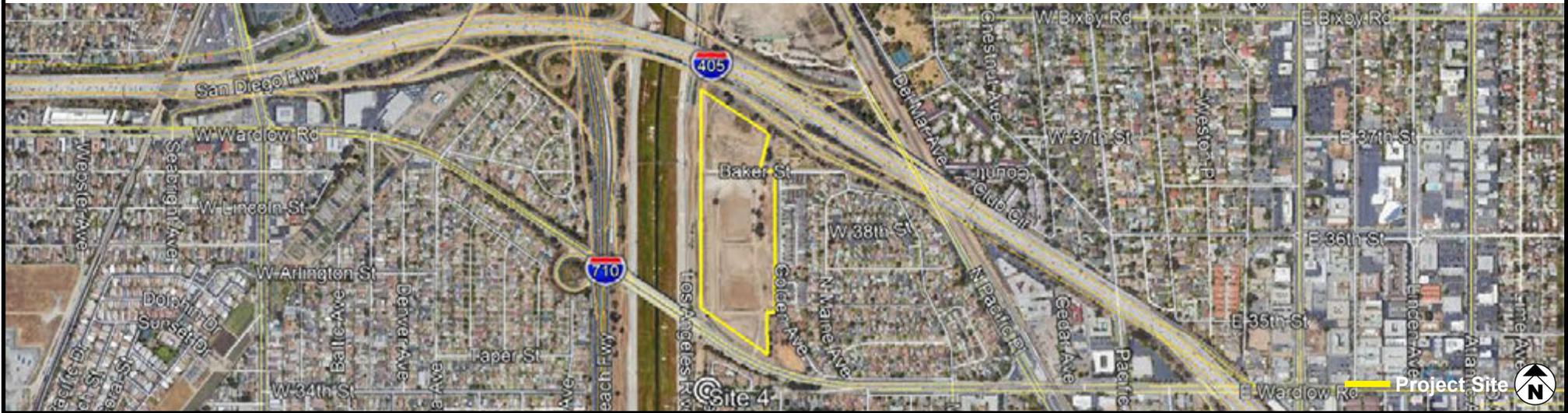
West



South



East



SOURCE: Google Earth - 2021

FIGURE IV.K-2d



North



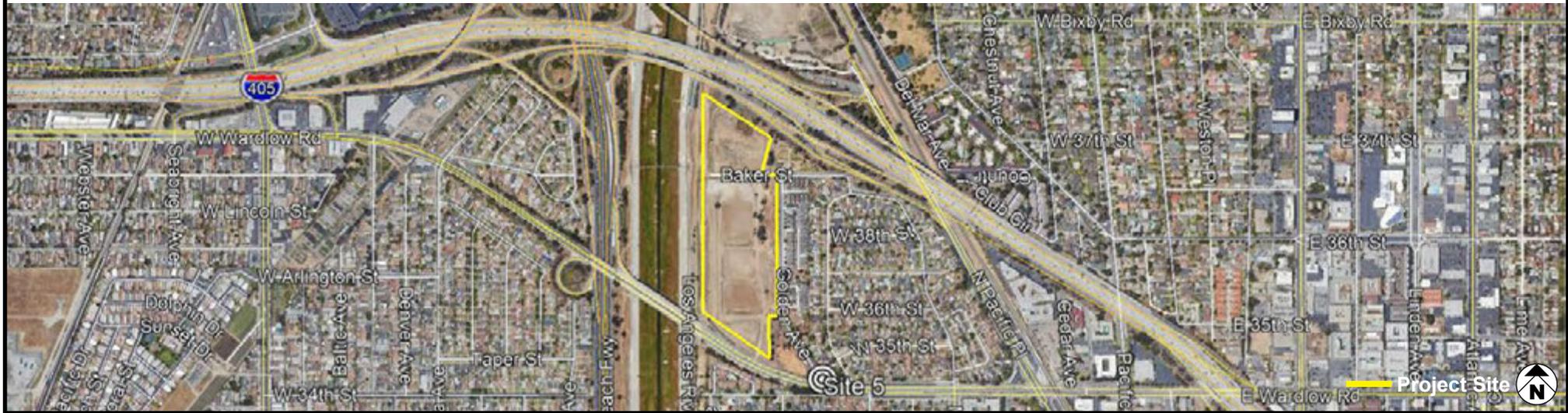
West



South



East



SOURCE: Google Earth - 2021

FIGURE IV.K-2e



North



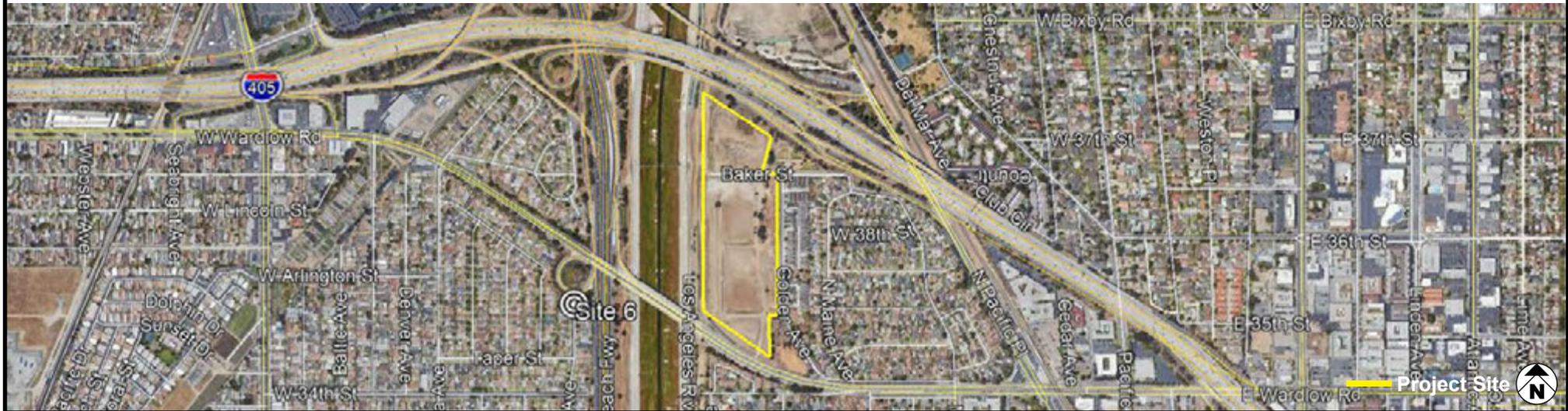
West



South



East



SOURCE: Google Earth - 2021

FIGURE IV.K-2f



North



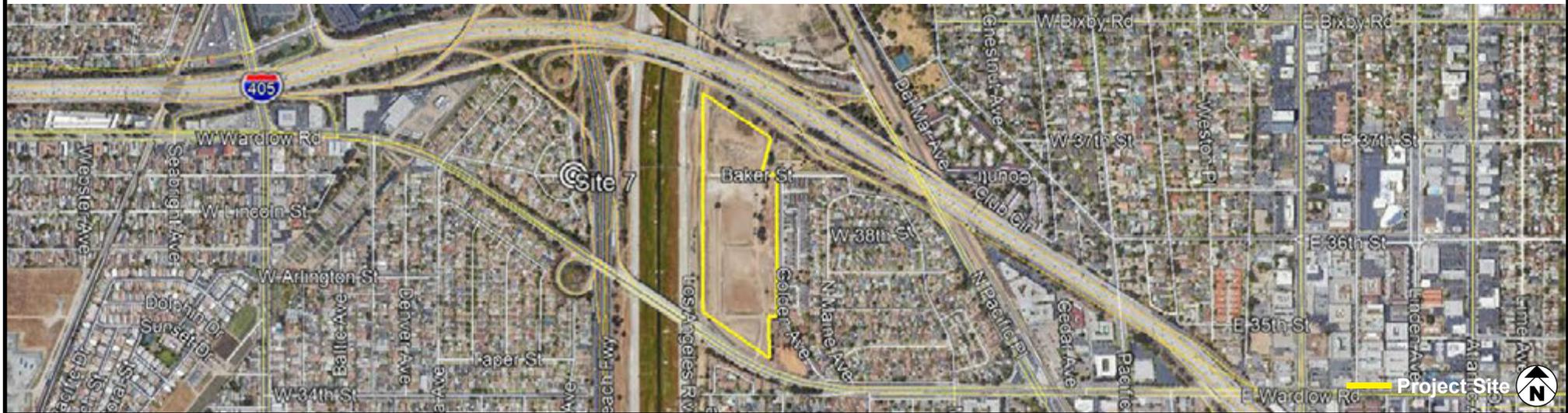
West



South



East



SOURCE: Google Earth - 2021

FIGURE IV.K-2g

## **Existing Vibration Levels**

The primary source of existing ground-borne vibration near the Project Site is vehicle traffic on nearby roadways, including Wardlow Road, Interstate 405 (I-405), and Interstate 710 (I-710). Wardlow Road is located directly south and I-405 is located directly north of the Project Site. I-710 is located approximately 700 feet west of the Project Site. Wardlow Road is designated by the City as a Minor Avenue and is not recorded as a roadway which generates high volumes of traffic.<sup>5</sup> However, the California Department of Transportation (Caltrans) data from 2019 shows that I-405 generates approximately 281,000 average daily trips (ADT) and 20,200 peak hour trips near the Project Site, and I-710 generates approximately 169,000 ADT and 12,800 peak hour trips near the Project Site.<sup>6</sup> According to the FTA,<sup>7</sup> typical road traffic-induced vibration levels are unlikely to be perceptible by people. In part, FTA indicates that “it is unusual for vibration from traffic including buses and trucks to be perceptible, even in a location close to major roadways.” Therefore, based on FTA published vibration data, the existing ground vibration environment in the Project vicinity would be below the perceptible levels. Trucks and buses typically generate vibration velocity levels of approximately 63 VdB (at 50-foot distance), and these levels could reach 72 VdB when trucks and buses pass over bumps in the road.

## **Noise Sensitive Land Uses**

Some land uses are considered more sensitive to intrusive noise than others based on the types of activities typically involved with the land use. As defined in the City’s General Plan, noise-sensitive uses include residential neighborhoods, schools, hospitals, religious facilities, libraries, offices, and parks. These uses are generally considered more sensitive to noise than are commercial and industrial land uses. An overview of the surrounding land uses in relation to the noise monitoring sites is described below:

- Site 1: Located within the northwest portion of the Project Site along the western portion of Baker Street, nearby sensitive uses include the residential neighborhood to the east along Golden Avenue.
- Site 2: Located within the Baker Street Park to the north of the Project Site, nearby sensitive uses include the residential neighborhood to the south along Baker Street and Golden Avenue.
- Site 3: Located to the east of the Project Site, nearby sensitive uses include the residential neighborhood along Golden Avenue.
- Site 4: Located to the south of the Project Site across Wardlow Road, sensitive uses include the residential neighborhood along W. 34<sup>th</sup> Street.

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5 City of Long Beach General Plan, Mobility Element, October 2013.

6 Caltrans, Traffic Volumes, <https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes>. Accessed April 2021.

7 Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf). Accessed April 2021.

- Site 5: Located to the southeast of the Project site along Golden Avenue, sensitive uses include the residential neighborhood along Golden Avenue.
- Site 6: Located to the west of the Project Site across the I-710 Freeway, sensitive uses include the residential neighborhood along Gale Avenue.
- Site 7: Located to the west of the Project Site across the I-710 Freeway, sensitive uses include the residential neighborhood along Gale Avenue.

### **Roadway Noise Levels**

In addition to ambient noise measurements, traffic noise on roadways in the surrounding areas was calculated to quantify AM and PM peak hour noise levels using information provided in the Traffic Impact Analysis prepared by Fehr and Peers (see **Appendix IV.M.1**). The seven intersections examined in the traffic impact analysis and the connecting roadway segments were modeled to estimate existing off-site traffic noise. The results of the modeling are provided in **Table IV.K-4: Estimated Existing Roadway Noise Levels**. As shown, AM noise levels ranged from a low of 54.2 dBA CNEL at Magnolia Avenue north of Wardlow Road (Intersection 2), to a high of 66.9 dBA CNEL at Santa Fe Avenue north of Wardlow Road (Intersection 1). In addition, PM noise levels ranged from a low of 52.4 dBA CNEL at Long Beach Boulevard north of Wardlow Road (Intersection 4) to a high of 67.8 dBA CNEL at Wardlow Road east of Long Beach Boulevard (Intersection 4).

**Table IV.K-4**  
**Estimated Existing Roadway Noise Levels**

Intersection	Roadway Segment	Time Period	Existing Roadway Noise Level (dBA CNEL)
<b><i>Santa Fe Avenue</i></b>			
1	North of Wardlow Road	AM	66.1
		PM	67.1
	South of Wardlow Road	AM	66.9
		PM	67.4
<b><i>Wardlow Road</i></b>			
1	East of Santa Fe Avenue	AM	65.5
		PM	65.2
	West of Santa Fe Avenue	AM	66.5
		PM	67.0
2	East of Magnolia Avenue	AM	63.7
		PM	66.0
	West of Magnolia Avenue	AM	62.0
		PM	63.7
3	East of Pacific Place	AM	64.3
		PM	66.3
	West of Pacific Place	AM	63.7
		PM	66.0
4	East of Long Beach Boulevard	AM	66.0

Intersection	Roadway Segment	Time Period	Existing Roadway Noise Level (dBA CNEL)
5	West of Long Beach Boulevard	PM	67.8
		AM	62.2
		PM	63.0
	East of Atlantic Avenue	AM	65.0
		PM	66.5
		West of Atlantic Avenue	AM
		PM	67.1
<b>Magnolia Avenue</b>			
2	North of Wardlow Road	AM	54.2
		PM	54.9
	South of Wardlow Road	AM	60.2
		PM	62.7
6	North of Spring Street	AM	60.2
		PM	62.5
	South of Spring Street	AM	61.0
		PM	63.8
<b>Pacific Place</b>			
3	North of Wardlow Road	AM	61.7
		PM	62.2
	South of Wardlow Road	AM	63.2
		PM	64.2
<b>Long Beach Boulevard</b>			
4	North of Wardlow Road	AM	59.0
		PM	52.4
	South of Wardlow Road	AM	57.0
		PM	43.0
<b>Atlantic Avenue</b>			
5	North of Wardlow Road	AM	57.3
		PM	59.4
	South of Wardlow Road	AM	57.0
		PM	59.1
<b>Spring Street</b>			
6	East of Magnolia Avenue	AM	59.7
		PM	62.6
	West of Magnolia Avenue	AM	54.8
		PM	57.4
7	East of Pacific Avenue	AM	62.4
		PM	64.7
	West of Pacific Avenue	AM	59.7
		PM	62.6
<b>Pacific Avenue</b>			
7	North of Spring Street	AM	62.4
		PM	63.8
	South of Spring Street	AM	62.1
		PM	63.6

Source: Based on Traffic Impact Analysis for the Integral Communities River Park Residential Project, Fehr and Peers, dated March 2021. Roadway noise model results are provided in **Appendix 4.K.4**.

### 3. REGULATORY SETTING

#### *Federal*

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project. With regard to noise exposure and workers, the Office of Safety and Health Administration (OSHA) regulations safeguard the hearing of workers exposed to occupational noise. OSHA is responsible for the protection against the effects of noise exposure when sound levels exceed those, listed in **Table IV.K-5: Permissible Noise Exposures**, when measured on the A-weighted scale of a standard sound level meter at slow response.<sup>8</sup>

**Table IV.K-5**  
**Permissible Noise Exposures**

Duration per day, hours	Sound level dBA
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

*Source: OSHA, Occupational Noise Exposure, <https://www.osha.gov/noise>. Accessed April 2021.*

#### **Federal Transit Administration Vibration Guidelines**

The FTA has published a technical manual, *Transit Noise and Vibration Impacts Assessment*, which provides ground-borne vibration impact criteria with respect to building damage during construction activities.<sup>9</sup> According to the FTA guidelines, a vibration criterion of 0.20 PPV should be considered as the significant impact level for nonengineered timber and masonry buildings. Structures or buildings constructed of reinforced concrete, steel, or timber have a vibration damage criterion of 0.50 PPV based on the FTA guidelines. Structures amplify ground-borne vibration, and wood-frame buildings, such as typical residential structures, are more affected by ground vibration than are heavier buildings. The level at which

<sup>8</sup> OSHA, Occupational Noise Exposure, <https://www.osha.gov/noise>. Accessed April 2021.

<sup>9</sup> FTA, Transit Noise and Vibration Impact Assessment, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf). Accessed April 2021.

ground-borne vibration is strong enough to cause architectural damage has not been determined conclusively.

The most conservative estimates are reflected in the FTA standards, shown in **Table IV.K-6: Construction Vibration Damage Criteria**. The FTA has also adopted standards for ground-borne vibration impacts related to human annoyance, as shown in **Table IV.K-7: Ground-borne Vibration Sensitivity Criteria**. These criteria are based on extensive research that suggests humans are sensitive to vibration velocities in the range of 8 to 80 hertz (Hz).<sup>10</sup>

**Table IV.K-6**  
**Construction Vibration Damage Criteria**

Building Category	PPV (ips)	Lv (VdB)
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Nonengineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA, Transit Noise and Vibration Impact Assessment, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf). Accessed April 2021.

Note: For Max Lv (VdB), Lv = the velocity level in decibels as measured in 1/3 octave bands of frequency over the frequency ranges of 8 to 80 Hz; VdB = vibration decibels; Hz = hertz; ips = inches per second.

**Table IV.K-7**  
**Ground-borne Vibration Sensitivity Criteria**

Building Category	Frequent Events	Occasional Events	Infrequent Events
<b>Category 1: High Sensitivity.</b> Buildings where vibration would interfere with interior operations (e.g., vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and research operations).	65 VdB <sup>1</sup>	65 VdB <sup>1</sup>	65 VdB <sup>1</sup>
<b>Category 2:</b> Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
<b>Category 3:</b> Institutional land uses, such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.	75 VdB	78 VdB	83 VdB

Source: FTA, Transit Noise and Vibration Impact Assessment, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf). Accessed April 2021.

Note:

<sup>1</sup> This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. For equipment that is more sensitive, a Detailed Vibration Analysis must be performed.

<sup>10</sup> FTA, Transit Noise and Vibration Impact Assessment, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf). Accessed April 2021.

## State

### Noise Standards

The State of California has adopted noise compatibility guidelines for general land use planning. The types of land uses addressed by the State and the acceptable noise categories for each land use are included in the State of California General Plan Guidelines, which is published and updated by the Governor's Office of Planning Research.<sup>11</sup> The level of acceptability of the noise environment is dependent on the activity associated with the particular land use. Noise exposure for single-family uses is normally acceptable when the CNEL at exterior residential locations is equal to or below 60 dBA, conditionally acceptable when the CNEL is between 55 to 70 dBA, and normally unacceptable when the CNEL exceeds 70 dBA. These guidelines apply to noise sources such as vehicular traffic, aircraft, and rail movements.

The proposed Project would be required to comply with California's noise insulation standards, which are codified in the 24 Cal. Code of Regs. Part 2 (the California Building Code). These noise standards are applied to new construction in California for the purpose of interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

### Vibration

Caltrans published its *Transportation and Construction Vibration Guidance Manual* in April 2020.<sup>12</sup> The manual provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. This manual provides guidelines for assessing vibration damage potential to various types of buildings, ranging from 0.08 to 0.12 inches per second for extremely fragile historic buildings, ruins, and ancient monuments, to 0.50 to 2.0 inches per second for modern industrial and commercial buildings.

The guidance and procedures provided in the Caltrans manual are suitable for use as screening tools for assessing the potential for adverse effects related to human perception and structural damage. General information on the potential effects of vibration on vibration-sensitive research and advanced-technology

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11 Governor's Office of Planning and Research, State of California General Plan Guidelines, (2017), [http://www.opr.ca.gov/docs/OPR\\_COMPLETE\\_7.31.17.pdf](http://www.opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf). Accessed April 2021.

12 Caltrans, Transportation and Construction Vibration Guidance Manual, <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>. Accessed April 2021.

facilities is also provided, but a discussion of detailed assessment methods in this area is beyond the manual's scope.

## **Local**

### **City of Long Beach Municipal Code**

The Long Beach Municipal Code (LBMC) Chapter 8.80 establishes acceptable ambient sound levels to regulate intrusive noises (e.g., stationary mechanical equipment and vehicles other than those traveling on public streets) within specific districts (land use zones) and provides procedures and criteria for the measurement of the sound level of noise sources. The LBMC provides exterior noise limits for five districts. These noise districts are:

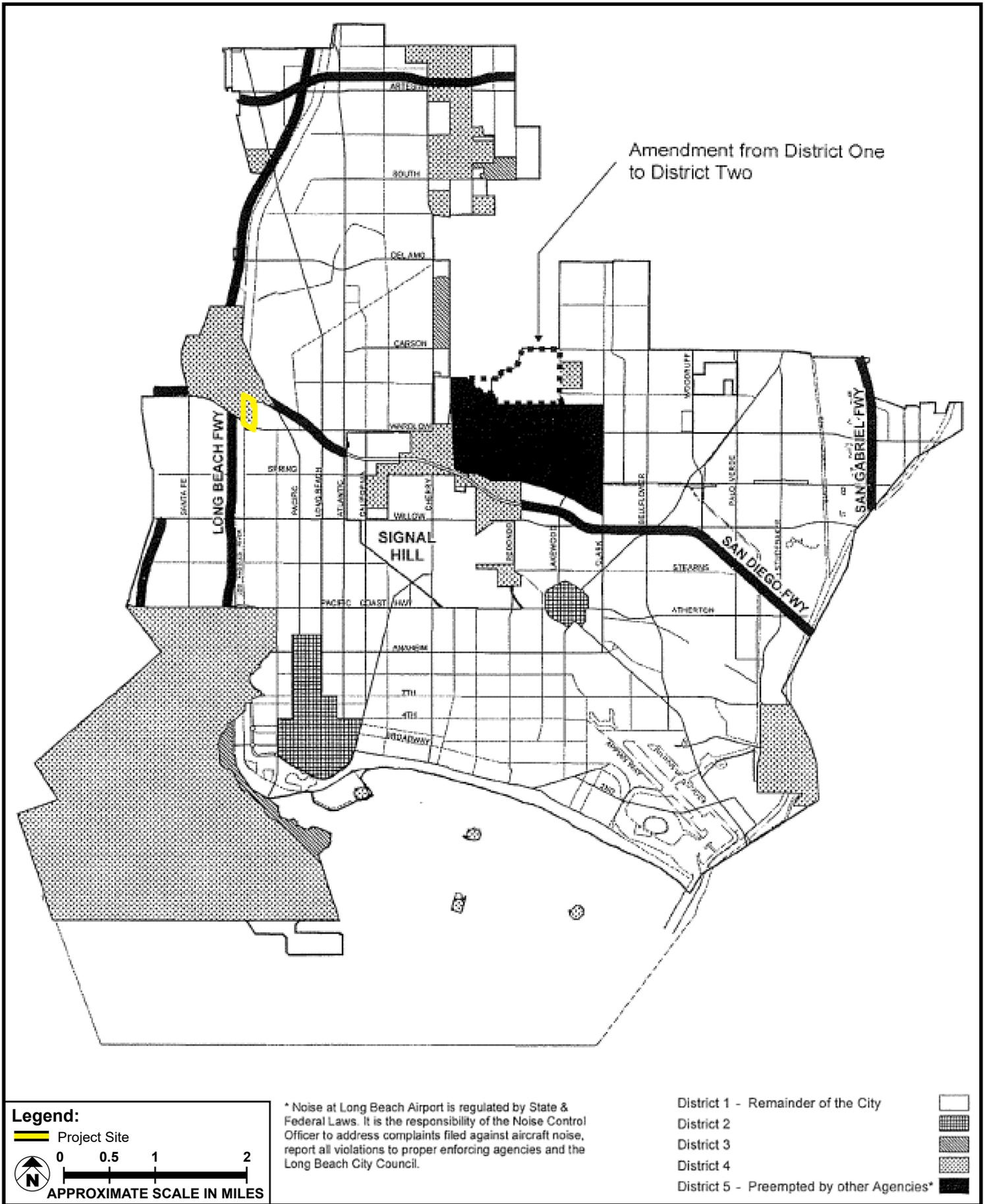
1. District One—includes predominantly residential uses with other land use types also present.
2. District Two—includes predominantly commercial uses with other land use types also present.
3. Districts Three and Four—include predominantly industrial uses with other land use types also present.
4. District Five—includes airports, freeways and waterways that are regulated by other agencies.

As shown in **Figure IV.K-3: City of Long Beach Noise District Map**, the Project Site is designated as a District 4 area of the City. However, the Project Site is bordered by areas designated as District 1 which have more stringent noise standards than District 4. The LBMC includes the following noise standards for District 1:

- Daytime (7:00 AM – 10:00 PM): 50 dBA
- Nighttime (10:00 PM – 7:00 AM) 45 dBA

Section 8.80.150 states that the noise standards provided in Section 8.80.160 shall be applied as follows:

- No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured from any other property, either incorporated or unincorporated, to exceed:
  1. The noise standard for that land use district as specified in Table A in Section 8.80.160 of the LBMC for a cumulative period of more than thirty (30) minutes in any hour; or
  2. The noise standard plus five (5) decibels for a cumulative period of more than fifteen (15) minutes in any hour; or
  3. The noise standard plus ten (10) decibels for a cumulative period of more than five (5) minutes in any hour; or
  4. The noise standard plus fifteen (15) decibels for a cumulative period of more than one (1) minute in any hour; or
  5. The noise standard plus twenty (20) decibels or the maximum measured ambient, for any period of time.



SOURCE: Google Earth - 2021

FIGURE IV.K-3

Section 8.80.170 of the LBMC sets interior noise levels for specific types of development, as shown in **Table IV.K-8: City of Long Beach Interior Noise Levels Standards**.

**Table IV.K-8  
City of Long Beach Interior Noise Levels Standards**

Land Use	Time Interval	Allowable Noise Level (dBA)
Residential	10:00 PM – 7:00 AM	35
	7:00 AM – 10:00 PM	45
School	7:00 AM – 10:00 PM (While school is on session)	45
Hospital, designated quiet zones, and noise sensitive zones	Anytime	40

*Source: Long Beach Municipal Code Section 8.80.170.*

Section 8.80.202 of the Long Beach Municipal Code sets restrictions on construction activities as follows:

- No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM and 7:00 AM the following day on weekdays or federal holidays, except for emergency work authorized by the Building Official.
- No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, except for emergency work authorized by the Building Official.
- No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.

The LBMC Section 8.80.200(n) requires that air conditioning equipment generate noise levels of no more than 55 dBA at any point on a neighboring property line. This standard would apply to all air conditioning and refrigerating equipment.

## City of Long Beach General Plan Noise Element

The City of Long Beach regulates noise and vibration based largely on the Noise Element of the General Plan and the criteria presented in the Municipal Code Noise Ordinance. The Noise Element, adopted in 1975, serves as a comprehensive program for noise control and abatement in Long Beach and includes an action program consisting of various measures that the City may implement in pursuing its noise control plan.

The Long Beach General Plan Noise Element provides outdoor and indoor noise standards for different types of land uses, as summarized in **Table IV.K-9: City of Long Beach General Plan Noise Level Standards**.

**Table IV.K-9**  
**City of Long Beach General Plan Noise Level Standards**

Land Use	Outdoor			Indoor (Ldn)
	Peak	L10	L50	
Residential (7:00 AM – 10:00 PM)	70	55	45	45
Residential (10:00 PM – 7:00 AM)	60	45	35	35
Commercial (anytime)	75	65	55	-
Industrial (anytime)	85	70	60	-

*Source: Long Beach General Plan Noise Element, 1975.*

The City's Draft General Plan<sup>13</sup> (December 2019) establishes noise control goals and polices, identifies potential noise problem areas, and outlines an ordinance for the control and abatement of noise. The following strategy and policies are applicable to the proposed Project:

- **Strategy No. 5:** Implement best practices to reduce impacts of noise from industrial sources.
  - Policy N 5-1: In observance of requirements imposed by the California Air Resources Board (CARB), limit the idling of heavy trucks during nighttime hours to less than five minutes.
  - Policy N 5-2: Where feasible, requirement equipment enclosure for pumps and compressors that exceed Municipal Code noise standards.
  - Policy N 5-3: Encourage conduction of high-noise or high-vibration activities in a set window or time during the day.

13 City of Long Beach, Draft General Plan 2040, Noise Element (December 2019), accessed November 2021, [https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/environmental/environmental-reports/pending/draft-noise-element/draft-noise-element\\_123019](https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/environmental/environmental-reports/pending/draft-noise-element/draft-noise-element_123019)

- Policy N 5-4: Industrial facility owners and/or operators should use equipment that generates lower noise and vibration levels, such as rubber-tired equipment rather than metal-tracked equipment.
- Policy N 5-5: Commercial delivery truck traffic should avoid residential areas whenever feasible.

### **Ground-Borne Vibration**

LBMC Section 8.80.200 prohibits the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way. The perception threshold as defined by the LBMC is 0.001 g's (gravity) in the frequency range of 0–30 hertz (Hz) and 0.003 g's in the frequency range of 30–100 Hz.<sup>14</sup>

In addition, the FTA has published a technical manual titled “Transit Noise and Vibration Impacts Assessment,” which provides ground-borne vibration impact criteria with respect to building damage during construction activities.<sup>15</sup> As discussed above, building vibration damage is measured in PPV described in the unit of inches per second. **Table IV.K-6** above provides the FTA vibration criteria applicable to construction activities. According to FTA guidelines, a vibration criterion of 0.20 PPV should be considered as the significant impact level for non-engineered timber and masonry buildings. Structures or buildings constructed of reinforced concrete, steel, or timber, have a vibration damage criterion of 0.50 PPV pursuant to the FTA guidelines.

The FTA guidance manual also provides vibration criteria for human annoyance for various uses. These criteria were established primarily for rapid transit (rail) projects and are based on the frequency of vibration events. Specific criteria are provided for three land use categories: (1) Vibration Category 1—High Sensitivity; (2) Vibration Category 2—Residential; and (3) Vibration Category 3—Institutional.

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14 One “g” is the acceleration due to gravity at the Earth’s surface, approximately 9.8 meters per second squared.

15 FTA, Transit Noise and Vibration Impact Assessment, [https://docs.vcrma.org/images/pdf/planning/ceqa/FTA\\_Noise\\_and\\_Vibration\\_Manual.pdf](https://docs.vcrma.org/images/pdf/planning/ceqa/FTA_Noise_and_Vibration_Manual.pdf). Accessed April 2021.

## 4. ENVIRONMENTAL IMPACTS

### Threshold of Significance

In order to assist in determining whether a project would have a significant effect on the environment, the City finds a project may be deemed to have a significant noise impact, if it would result in the:

**Threshold 4.K-1: 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?**

**Threshold 4.K-2: Generation of excessive groundborne vibration or groundborne noise levels?**

**Threshold 4.K-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

As discussed in the Initial Study (**Appendix I.1**), the Project Site is not located in the vicinity of a private airstrip nor is it located within two miles of an airport or within an airport land use plan. Impacts related to airport noise would therefore be less than significant and are not further discussed in this section.

### **Construction Noise**

The City's General Plan and Municipal Code do not establish numeric maximum acceptable source noise levels or noise level increases at potentially affected receivers. Section 8.80.202 of the LBMC prohibits construction activities between the hours of 7:00 PM and 7:00 AM the following day on weekdays or federal holidays, between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, and at any time on Sunday. Construction occurring outside of the allowed time periods would be subject to the City's allowable noise levels.

The FTA *Transit Noise and Vibration Impact Assessment Manual*<sup>16</sup> provides a general noise assessment guideline to assess potential construction noise impacts. A general noise assessment is suitable and appropriate given the current stage of planning and evaluation for this Project. The FTA's General Assessment Construction Noise Criteria identifies daytime and nighttime thresholds for residential, commercial, and industrial land uses, which are considered reasonable criteria for use in assessing the potential for adverse community reaction to noise generated by construction activities. The construction

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16 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018, accessed September 2021, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf)

noise criteria threshold for residential uses is 90 dBA (Leq-1hour) during the daytime and 80 dBA (Leq-1hour) during the nighttime period. Additionally, construction noise thresholds for commercial and industrial uses are 100 dBA (Leq-1hour) during both the daytime and nighttime periods. Since the construction-related noise level threshold represents the energy average of the noise source over a given time, they are expressed as Leq noise levels. With regard to increases in A-weighted noise levels, a 10 dBA change is subjectively heard as approximately doubling in loudness and can cause adverse response.<sup>17</sup> As such, in addition to the FTA General Assessment Construction Noise Criteria for residential, commercial, and industrial uses, an increase of 10 dBA or more above ambient noise levels is considered significant.

### **Operational Noise**

The accuracy of sound level meters and computer models is no better than 1 dBA. This is also the human loudness difference discrimination under ideal laboratory conditions. Most people cannot distinguish less than 3 dBA noise difference. Because of the logarithmic nature of the noise scale, it requires a dramatic increase in traffic to create even a perceptible change in noise levels. A 1 dBA increase requires a 25 percent increase in traffic volume. A 3 dBA increase occurs when traffic volumes double. In those areas where traffic volumes are already high enough to create a noise concern, few projects would individually cause traffic volumes to double. Off-site traffic noise impacts tend to be cumulative rather than an individual impact.

Therefore, the proposed Project would have a significant impact on noise levels from Project operations if:

- The proposed Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to exceed the City's Exterior Noise Standards; or
- Off-site noise levels increased by more than 3 dBA due to project-related traffic near sensitive receptors.

### **Vibration**

The ground-borne vibration limit provided by the City is based on human perception in terms of acceleration level in g's. As discussed above, vibration levels can be described in terms of acceleration or velocity. Since the published vibration levels for typical construction equipment are expressed in terms of velocity (PPV and/or VdB), the FTA guidelines (in terms of velocity) are used to evaluate potential impacts related to construction vibration for both potential building damage and human annoyance. Based on this

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17 California Department of Transportation, *Technical Noise Supplement*, September 2013, accessed September 2021, <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf>

FTA guidance, impacts relative to ground-borne vibration associated with potential building damage would be considered significant if any of the following future events were to occur:

- Project construction activities cause ground-borne vibration levels to exceed 0.5 PPV at the nearest off-site reinforced-concrete, steel, or timber building.
- Project construction activities cause ground-borne vibration levels to exceed 0.3 PPV at the nearest off-site engineered concrete and masonry building.
- Project construction activities cause ground-borne vibration levels to exceed 0.2 PPV at the nearest off-site non-engineered timber and masonry building.
- Project construction activities cause ground-borne vibration levels to exceed 0.12 PPV at buildings extremely susceptible to vibration damage, such as historic buildings.

Vibration impacts associated with human annoyance would be significant if the following were to occur:

- Project construction activities cause ground-borne vibration levels to exceed 80 VdB at off-site sensitive uses, including residential uses.

## 5. METHODOLOGY

### Ambient Noise Measurements

To establish baseline noise conditions, existing ambient noise levels, as described above, were monitored at the seven representative locations within the vicinity of the Project Site. These monitored noise levels serve as the baseline for the analysis of proposed Project impacts. The baseline noise-monitoring program was conducted on February 3, 2021, using a Larson Davis 831 Type 1 Sound Level Meter.

### *Construction Noise*

#### On-Site Construction Activities

Construction activities typically generate noise from the operation of equipment required for construction of various facilities. Noise impacts from on-site construction and staging of construction trucks were evaluated by determining the noise levels generated by different types of construction activity, calculating the construction-related noise level at nearby noise-sensitive receptor locations, and comparing these construction-related noise levels to existing ambient noise levels (i.e., noise levels without project-related construction noise). The actual noise level would vary, depending upon the equipment type, model, the type of work activity being performed, and the condition of the equipment.

In order to calculate a construction CNEL, hourly activity or utilization factors (i.e., the percentage of normal construction activity that would occur, or construction equipment that would be active, during each hour of the day) are estimated based on the temporal characteristics of other previous and current

construction projects. The hourly activity factors express the percentage of time that construction activities would emit average noise levels. Typical noise levels for each type of construction equipment were obtained from the FHWA Roadway Construction Noise Model. Calculated noise levels associated with construction at noise-sensitive receptor locations were then compared to estimated existing noise levels and the construction noise significance thresholds identified below.

### **Construction Traffic Noise**

The analysis of construction traffic noise impacts focuses on off-site areas by: (1) identifying major roadways that may be used for construction worker commute routes or truck haul routes; (2) generally identifying the nature and location of noise-sensitive receptors along those routes; and (3) evaluating the traffic characteristics along those routes, specifically as related to existing traffic volumes. Construction traffic volume and road parameter data would be input into the FHWA TNM model to calculate average noise levels for these trips. Construction trucks staging and hauling route noise impacts would be evaluated by determining the noise levels generated by different types of construction activity, calculating the construction-related noise levels and comparing against existing ambient noise levels (i.e., noise levels without construction noise) and exterior standards.

### **Construction Equipment Vibration**

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. While ground vibrations from construction activities do not often reach the levels that can damage structures, fragile buildings must receive special consideration.

Impacts due to construction activities were evaluated by identifying vibration sources (i.e., construction equipment), measuring the distance between vibration sources and surrounding structure locations, and making a significance determination.

For quantitative construction vibration assessments related to building damage and human annoyance, vibration source levels for construction equipment is taken from the FTA *Transit Noise and Vibration Impact Assessment Manual*. Building damage would be assessed for each piece of equipment individually and assessed in terms of peak particle velocity. Ground-borne vibration related to human annoyance is assessed in terms of rms velocity levels.

The vibration source levels for various types of equipment are based on data provided by the FTA.

## ***Operational Noise***

### **Roadway Noise**

Traffic data from the proposed Project's Traffic Impact Analysis (**Appendix IV.L.1**) was utilized to calculate roadway traffic noise levels. Traffic noise levels were modeled using the FHWA TNM. The FHWA TNM calculates noise associated with a specific line source and the results characterize noise generated by motor vehicle travel along a specific roadway segment. The traffic noise impact analysis is based on the 24-hour CNEL noise descriptor and incorporates traffic volumes, vehicle mix, posted speed limits, roadway geometry, and site conditions. Noise levels were evaluated with respect to the following traffic scenarios:

- Existing Baseline (2020) Conditions;
- Existing Baseline (2020) Plus Project;
- Opening Year (2026) No Project; and
- Opening Year (2026) Plus Project.

### **Vibration**

The majority of the Project's operational-related vibration sources, such as mechanical and electrical equipment, would incorporate vibration attenuation mounts, as required by the particular equipment specifications. Therefore, operation of the proposed Project would not increase the existing vibration levels in the immediate vicinity of the proposed Project and, as such, vibration impacts associated with the proposed Project would be minimal. Therefore, the ground borne vibration analysis is limited to Project-related construction activities.

## **6. PROJECT IMPACTS**

**Threshold 4.K-1:        Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

### ***Construction***

Noise from Project construction activities will be affected by the amount of construction equipment, the location of this equipment, the timing and duration of construction activities, and the relative distance to noise-sensitive receivers. Construction activities that would occur during the construction phases (site clearing, bioremediation, grading, building construction, utility installation/street improvements, and architectural coating) would generate both steady-state and episodic noise that would be heard both on and off the Project Site. Each phase involves the use of different types of construction equipment and,

therefore, has its own distinct noise characteristics. The proposed Project would be constructed using typical construction techniques; no blasting, impact pile driving, or jackhammers would be required.

### **On-Site Construction Noise**

Individual pieces of construction equipment that would be used during construction produce maximum noise levels of 73 dBA to 85 dBA at a reference distance of 50 feet from the noise source, as shown in

**Table IV.K-10: Typical Maximum Noise Levels for Project Construction Equipment.**

To characterize construction-period noise levels, the average (hourly Leq) noise level associated with each construction stage was calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage. These noise levels are typically associated with multiple pieces of equipment operating simultaneously.

**Table IV.K-10  
Typical Maximum Noise Levels for Project Construction Equipment**

<b>Equipment Description</b>	<b>Typical Duty Cycle (%)</b>	<b>Spec Lmax (dBA)</b>	<b>Actual Lmax (dBA)</b>
Air Compressor	40	80.0	77.7
Backhoe	40	80.0	77.6
Crane	16	85.0	80.6
Dozer	40	85.0	81.7
Excavator	40	85.0	80.7
Forklift	40	85.0	N/A
Generator	50	82.0	80.6
Grader	40	85.0	N/A
Loader	40	80.0	79.1
Paver	50	85.0	77.2
Roller	20	85.0	80.0
Scraper	40	85.0	83.6
Tractor	40	84.0	N/A
Welder	40	73.0	74.0

Source: FHWA Roadway Construction Noise Model (RCNM) version 1.1

Note: N/A = not available.

Construction equipment operates at its noisiest levels for certain percentages of time during operation. Equipment such as excavators, graders, and loaders would operate at different percentages over the

course of an hour.<sup>18</sup> During a construction day, the highest noise levels would be generated when multiple pieces of construction equipment are operated concurrently. The estimated construction noise levels were calculated for a scenario in which up to nine pieces of construction equipment was assumed to be operating simultaneously, given the physical size of the Project Site and logistical limitations, and with the noise equipment located at the construction area nearest to the affected receivers to present a conservative impact analysis. This is considered a worst-case evaluation because the proposed Project would typically use fewer pieces of equipment simultaneously at any given time and, accordingly, would likely generate lower noise levels than reported herein.

Separate forecasts of construction noise levels from on-site construction at each of the noise sensitive uses within the immediate vicinity were completed. The forecast noise levels at the nearest residential uses to the Project Site from construction activity are shown in **Table IV.K-11: Construction Maximum Noise Estimates**. It is important to note, Location 1 was measured within the Project Site and therefore was not included in the analysis below. As shown in **Table IV.K-11**, construction noise levels would range from a low 61.9 dBA (Leq-1hour) at the residential uses to the west (Site 6 and 7) to a high of 85.7 dBA (Leq-1hour) at the residential uses to the east (Site 3). When considering the existing noise environment and the absolute noise levels during construction activities, noise levels would be below the FTA criteria threshold of 90 dBA (Leq-1hour) during the daytime period for residential uses.

As mentioned previously, a 10 dBA change is subjectively heard as approximately doubling in loudness and can cause adverse response. Construction noise levels during the daytime period would result in maximum 26.7 dBA above ambient at the residential uses to the east (Site 3). Construction noise levels would be required to be reduced by approximately 16.7 dBA. As such, without the implementation of mitigation measures, construction noise impacts would be considered significant.

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18 Federal Highway Administration, Traffic Noise Model (2006).

**Table IV.K-11  
Construction Maximum Noise Estimates**

Noise Monitoring Site	Nearest Off-Site Building Structures	Distance of Construction Equipment from Project site (feet)	Construction Noise (Leq-1hour)	Ambient Noise Leq (dBA)	Ambient plus Construction Noise <sup>1</sup>	Significance Threshold (dBA)	Significant Impact?
Site 2	Residential uses to the east	160	77.8	60.1	77.9	90.0	No
Site 3	Residential uses to the east	60	85.7	59.0	85.7	90.0	No
Site 4	Residential uses to the south	450	68.7	52.4	68.8	90.0	No
Site 5	Residential uses to the south	430	69.2	71.7	73.6	90.0	No
Site 6	Residential uses to the west	1,000	61.9	61.9	64.9	90.0	No
Site 7	Residential uses to the west	1,000	61.9	62.3	65.1	90.0	No

Source: Refer to **Appendix 4.K.2** for construction noise worksheets.

Note: <sup>1</sup> Logarithmic increase = Ambient Noise + Modeled Construction Noise Level.

### **KOff-Site Construction Noise**

Construction of the proposed Project would require worker, haul, and vendor truck trips to and from the site to work on the site, export demolition debris, and deliver supplies to the site. Trucks traveling to and from the Project Site would be required to travel along a haul route approved by the City. Approximately 9,000 total hauling trips (169 days) would take place during the bioremediation phase, totaling to approximately 53 haul truck trips per workday. Additionally, approximately 13,000 total haul truck trips (66 days) would take place during the grading phase, totaling to approximately 197 haul truck trips per workday. Haul truck traffic would take the most direct route to the freeway. Conservatively, it was assumed haul trucks would travel south along Golden Avenue to Wardlow Road where they would travel west to the I-710 ramps. However, a new access driveway would be created directly onto Wardlow Road and would not require travel adjacent to the single-family residential uses along Golden Avenue Road.

Project haul truck trips which include medium- and heavy-duty trucks would generate noise levels of approximately 60.2 dBA and 65.0 dBA, respectively, measured at a distance of 25 feet from the nearest sensitive receptors. As shown in **Table IV.K-3**, existing noise levels along the anticipated haul route along Wardlow Road is 71.7 dBA (Site 5). The noise level increases from truck trips would be below the significance threshold of 5 dBA. Accordingly, off-site construction noise impacts would be less than significant.

## **Operation**

### **Roadway Noise**

**Table IV.K-12: Off-Site Roadway Traffic Noise Impacts—Existing Baseline Plus Project** presents the estimated off-site traffic noise levels from the proposed Project. As shown in **Table IV.K-12**, AM roadway noise level increases ranged from a low of 0 dBA CNEL to a high of 2.0 dBA CNEL at Magnolia Avenue north of Wardlow Road (Intersection 2). Moreover, PM roadway noise level increases ranged from a low of 0 dBA CNEL to a high of 1.4 dBA CNEL at Magnolia Avenue north of Wardlow Road (Intersection 2). As such, the proposed Project would not result in a 3 dBA CNEL increase at any of the study intersections. Accordingly, roadway noise impacts due to the proposed Project would be less than significant.

### **Fixed-Mechanical Equipment Noise**

The proposed Project would introduce various stationary noise sources, including HVAC systems. All Project mechanical equipment would be required to be designed with appropriate noise-control devices, such as sound attenuators, acoustics louvers, or sound screens/parapet walls, to comply with noise-limitation requirements provided in Chapter 8.80 of the LBMC. The City's existing General Plan policies would protect residents from excessive stationary noise sources and ensure new land uses meet the LBMC's noise standards through evaluation and design considerations. Thus, stationary, and other sources of noise would be controlled by General Plan goals and policies, and the LBMC, which limit allowable noise levels at adjacent properties. Therefore, through compliance with the requirements in Chapter 8.80 of the LBMC and building permit approval subsequent to the City's development review process, operation of mechanical equipment for the proposed Project would be designed to not exceed the City's threshold of significance and impacts would be less than significant.

**Table IV.K-12**  
**Off-Site Roadway Traffic Noise Impacts—Existing Baseline Plus Project**

Intersection	Roadway Segment	Time Period	Existing Baseline	Existing Baseline	Change	Significant Impact	
			(2020)	(2020) Plus Project			
			(dBA)				
<b>Santa Fe Avenue</b>							
1	North of Wardlow Road	AM	66.1	66.1	0.0	No	
		PM	67.1	67.1	0.0	No	
	South of Wardlow Road	AM	66.9	66.9	0.0	No	
		PM	67.4	67.4	0.0	No	
<b>Wardlow Road</b>							
1	East of Santa Fe Avenue	AM	65.5	65.5	0.0	No	
		PM	65.2	65.2	0.0	No	
	West of Santa Fe Avenue	AM	66.5	66.6	+0.1	No	
		PM	67.0	67.1	+0.1	No	
	2	East of Magnolia Avenue	AM	63.7	63.8	+0.1	No
			PM	66.0	66.2	+0.2	No
3	West of Magnolia Avenue	AM	62.0	61.8	0.0	No	
		PM	63.7	63.8	+0.1	No	
3	East of Pacific Place	AM	64.3	64.4	+0.1	No	
		PM	66.3	66.4	+0.1	No	
	West of Pacific Place	AM	63.7	63.8	+0.1	No	
		PM	66.0	66.2	+0.2	No	
4	East of Long Beach Boulevard	AM	66.0	66.1	+0.1	No	
		PM	67.8	67.9	+0.1	No	
	West of Long Beach Boulevard	AM	62.2	62.3	+0.1	No	
		PM	63.0	63.1	+0.1	No	
5	East of Atlantic Avenue	AM	65.0	65.2	+0.2	No	
		PM	66.5	66.7	+0.2	No	
	West of Atlantic Avenue	AM	65.3	65.4	+0.1	No	
		PM	67.1	67.1	0.0	No	
<b>Magnolia Avenue</b>							
2	North of Wardlow Road	AM	54.2	56.2	+2.0	No	
		PM	54.9	56.3	+1.4	No	
	South of Wardlow Road	AM	60.2	60.2	0.0	No	
		PM	62.7	62.8	+0.1	No	
	6	North of Spring Street	AM	60.2	60.4	+0.2	No
			PM	62.5	62.7	+0.2	No
6	South of Spring Street	AM	61.0	61.1	+0.1	No	
		PM	63.8	63.9	+0.1	No	
<b>Pacific Place</b>							
3	North of Wardlow Road	AM	61.7	62.0	+0.3	No	
		PM	62.2	62.3	+0.1	No	
	South of Wardlow Road	AM	63.2	63.4	+0.2	No	
		PM	64.2	64.3	+0.1	No	

Intersection	Roadway Segment	Time Period	Existing Baseline	Existing Baseline	Change	Significant Impact
			(2020)	(2020) Plus Project		
			(dBA)			
<b>Long Beach Boulevard</b>						
4	North of Wardlow Road	AM	59.0	59.0	0.0	No
		PM	52.4	52.5	+0.1	No
	South of Wardlow Road	AM	57.0	57.0	0.0	No
		PM	43.0	43.5	+0.5	No
<b>Atlantic Avenue</b>						
5	North of Wardlow Road	AM	57.3	57.3	0.0	No
		PM	59.4	59.4	0.0	No
	South of Wardlow Road	AM	57.0	56.9	0.0	No
		PM	59.1	59.0	0.0	No
<b>Spring Street</b>						
6	East of Magnolia Avenue	AM	59.7	59.7	0.0	No
		PM	62.6	62.7	+0.1	No
	West of Magnolia Avenue	AM	54.8	54.8	0.0	No
		PM	57.4	57.1	0.0	No
7	East of Pacific Avenue	AM	62.4	62.4	0.0	No
		PM	64.7	64.8	+0.1	No
	West of Pacific Avenue	AM	59.7	59.7	0.0	No
		PM	62.6	62.7	+0.1	No
<b>Pacific Avenue</b>						
7	North of Spring Street	AM	62.4	62.5	+0.1	No
		PM	63.8	63.8	0.0	No
	South of Spring Street	AM	62.1	62.2	+0.1	No
		PM	63.6	63.7	+0.1	No

Source: Based on Traffic Impact Analysis for the Integral Communities River Park Residential Project, Fehr and Peers, dated March 2021. Roadway noise model results are provided in **Appendix 4.K.4**.

#### Threshold 4.K-2: Generation of excessive groundborne vibration or groundborne noise levels?

**Table IV.K-13: On-Site Construction Vibration Impacts—Building Damage** and **Table 4.K-14: On-Site Construction Vibration Impacts—Human Annoyance** presents the construction vibration impacts associated with on-site construction in terms of building damage and human annoyance, respectively. It is important to note, Location 1 was measured within the Project Site and therefore was not included in the analysis below.

As shown in **Table IV.K-13**, the forecasted vibration levels due to on-site construction activities would not exceed the building damage significance threshold of 0.2 PPV ips for all sites surrounding the Project area during construction. Due to the distance of the Project-identified sensitive receptors, on-site construction vibration would not result in a significant vibration impact with regard to building damage. Impacts related to building damage from on-site construction vibration would not be considered significant.

**Table IV.K-13  
On-Site Construction Vibration Impacts—Building Damage**

Noise Monitoring Site	Nearest Off-Site Building Structures	Estimated Vibration Velocity Levels at the Nearest Off-Site Structures from Construction Equipment					Significance Threshold (PPV ips)
		Vibratory Roller	Large Bulldozer	Caisson Drilling	Loaded Trucks	Small bulldozer	
<i>FTA Reference Vibration Levels at 25 feet</i>							
Site 2	Residential uses to the east (160 feet)	0.013	0.005	0.005	0.005	0.000	0.2
Site 3	Residential uses to the east (60 feet)	0.056	0.024	0.024	0.020	0.001	0.2
Site 4	Residential uses to the south (450 feet)	0.003	0.001	0.001	0.001	0.000	0.2
Site 5	Residential uses to the south (430 feet)	0.003	0.001	0.001	0.001	0.001	0.2
Site 6	Residential uses to the west (1,000 feet)	0.001	0.000	0.000	0.000	0.000	0.2
Site 7	Residential uses to the west (1,000 feet)	0.001	0.000	0.000	0.000	0.000	0.2

Source: US Department of Transportation, Federal Transportation Authority, Transit Noise and Vibration Impact Assessment  
Source: Refer to **Appendix 4.K.3** for construction vibration worksheets.

As shown in **Table IV.K-14**, the forecasted vibration levels due to on-site construction activities would not exceed the human annoyance threshold for infrequent events of 80 VdB for all sites surrounding the Project area during construction. Due to the distance of the Project-identified sensitive receptors, on-site construction vibration would not result in a significant vibration impact with regard to human annoyance. Moreover, the LBMC prohibits construction outside daytime hours; therefore, construction vibration activities would occur outside hours when people normally sleep. Impacts related to human annoyance from on-site construction vibration would not be considered significant.

**Table IV.K-14**  
**On-Site Construction Vibration Impacts—Human Annoyance**

Noise Monitoring Site	Nearest Off-Site Building Structures	Estimated Vibration Velocity Levels at the Nearest Off-Site Structures from Construction Equipment					Significance Threshold (VdB)
		Vibratory Roller	Large Bulldozer	Caisson Drilling	Loaded Trucks	Small bulldozer	
<i>FTA Reference Vibration Levels at 25 feet</i>							
Site 2	Residential uses to the east (160 feet)	70	63	63	61	33	80.0
Site 3	Residential uses to the east (60 feet)	79	76	76	74	46	80.0
Site 4	Residential uses to the south (450 feet)	57	49	49	48	20	80.0
Site 5	Residential uses to the south (430 feet)	57	50	50	49	20	80.0
Site 6	Residential uses to the west (1,000 feet)	46	39	39	38	9	80.0
Site 7	Residential uses to the west (1,000 feet)	46	39	39	38	9	80.0

Source: US Department of Transportation, Federal Transportation Authority, Transit Noise and Vibration Impact Assessment  
Source: Refer to **Appendix 4.K.3** for construction vibration worksheets.

## 7. CUMULATIVE IMPACTS

A listing of potential related projects located in the Project vicinity that might be developed or under construction within the same timeframe as the Project is located in **Table III-1: List of Related Projects in Section III: Environmental Setting**.

### **Construction Noise**

Noise impacts are localized in nature and decrease with distance. Cumulative construction noise impacts have the potential to occur when multiple construction projects in the local area generate noise within the same time frame and contribute to the local ambient noise environment. As shown in **Table IV.K-11**, construction noise impacts would be below the FTA criteria threshold of 90 dBA (Leq-1hour) during the daytime period for residential uses. However, construction noise levels would be required to be reduced

by approximately 16.7 dBA to reduce impacts related to adverse responses to noise levels 10 dBA above ambient. The timing of the construction activities for cumulative projects cannot be defined. Any quantitative analysis of related projects to assume concurrent construction would be entirely speculative. It could reasonably be assumed that cumulative projects would implement noise reduction features and mitigation measures to lessen to the feasible potential noise impacts from construction. As further discussed below, implementation of **Mitigation Measure MM N-1** would include construction best management practices to reduce noise levels to less than 10 dBA above ambient. As mentioned previously, Section 8.80.202 of the LBMC prohibits construction activities between the hours of 7:00 PM and 7:00 AM the following day on weekdays or federal holidays, between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, and at any time on Sunday. Consistent with City requirements, construction activities associated with the proposed Project and related projects would occur during these hours. Therefore, combined construction noise impact of the related projects and the proposed Project's contribution would not cause a significant cumulative impact. Consequently, impacts would be less than significant.

### ***Vibration***

Vibration impacts are generally less than significant when the receptor is more than 25 feet from the vibration source. The nearest related project is the Self-Storage/RV Storage Facility project (3701 Pacific Place) which is approximately 450 feet north of the Project Site. Accordingly, there are no related projects anticipating construction concurrently with the proposed Project that would also be within 25 feet of the sensitive receptors that could be affected by construction. As such, there would be no cumulative sources of construction vibration and cumulative impacts would be less than significant.

### ***Operational Noise***

Mechanical equipment for the proposed Project and related projects would be required to be designed with appropriate noise-control devices, such as sound attenuators, acoustics louvers, or sound screens/parapet walls, to comply with noise-limitation requirements provided in Chapter 8.80 of the LBMC. As discussed previously, the City's existing General Plan policies would protect residents from excessive stationary noise sources and ensure new land uses meet the LBMC's noise standards through evaluation and design considerations. Thus, stationary, and other sources of noise would be controlled by General Plan goals and policies and the LBMC, which limits allowable noise levels at adjacent properties. Additionally, as the nearest related project is 450 feet north of the Project Site operational noise from any related project would not combine with operational noise from the proposed Project to create a significant combined noise impact. Accordingly, a significant cumulative increase in permanent ambient noise levels would not occur and, therefore, the impact would be less than significant. Therefore, the proposed Project's contribution to cumulative operational noise impacts would not be cumulatively considerable.

## Vehicle Noise

Cumulative noise impacts due to off-site motor vehicle travel during Project operations at buildout were analyzed by comparing the projected increase in traffic noise levels from Opening Year (2026) No Project conditions to Opening Year (2026) Plus Project. Opening Year traffic forecasts include the effects of known related projects expected to be implemented in the vicinity of the Project Site prior to the buildout date of the proposed Project.

**Table IV.K-15: Off-Site Roadway Traffic Noise Impacts—Cumulative** presents the estimated cumulative off-site traffic noise levels. As shown in **Table IV.K-15**, AM roadway noise level increases ranged from a low of 0 dBA CNEL to a high of 1.9 dBA CNEL at Magnolia Avenue north of Wardlow Road (Intersection 2). Moreover, PM roadway noise level increases ranged from a low of 0 dBA CNEL to a high of 1.3 dBA CNEL at Magnolia Avenue north of Wardlow Road (Intersection 2). As such, the proposed Project would not result in a 3 dBA increase at any of the study intersections. Accordingly, cumulative roadway noise impacts due to the proposed Project would be less than significant.

**Table IV.K-15  
Off-Site Roadway Traffic Noise Impacts – Cumulative**

Intersection	Roadway Segment	Time Period	Opening Year	Opening Year	Change	Significant Impact
			(2026) No Project	(2026) Plus Project		
			(dBA)			
<b>Santa Fe Avenue</b>						
1	North of Wardlow Road	AM	66.2	66.2	0.0	No
		PM	67.2	67.2	0.0	No
	South of Wardlow Road	AM	67.0	67.0	0.0	No
		PM	67.5	67.5	0.0	No
<b>Wardlow Road</b>						
1	East of Santa Fe Avenue	AM	65.6	65.6	0.0	No
		PM	65.3	65.4	+0.1	No
	West of Santa Fe Avenue	AM	66.7	66.7	0.0	No
		PM	67.2	67.2	0.0	No
2	East of Magnolia Avenue	AM	63.9	64.0	+0.1	No
		PM	66.3	66.5	+0.2	No
	West of Magnolia Avenue	AM	62.1	61.9	0.0	No
		PM	64.2	64.3	+0.1	No
3	East of Pacific Place	AM	64.6	64.6	0.0	No
		PM	66.4	66.5	+0.1	No
	West of Pacific Place	AM	63.9	64.0	+0.1	No
		PM	66.3	66.5	+0.2	No
4	East of Long Beach Boulevard	AM	66.2	66.2	0.0	No
		PM	67.9	68.0	+0.1	No
	West of Long Beach Boulevard	AM	62.4	62.5	+0.1	No
		PM	63.2	63.2	0.0	No

Intersection	Roadway Segment	Time Period	Opening Year	Opening Year	Change	Significant Impact
			(2026) No Project	(2026) Plus Project		
			(dBA)			
5	East of Atlantic Avenue	AM	64.6	64.8	+0.2	No
		PM	66.6	66.8	+0.2	No
	West of Atlantic Avenue	AM	65.4	65.5	+0.1	No
		PM	67.2	67.2	0.0	No
<b>Magnolia Avenue</b>						
2	North of Wardlow Road	AM	54.4	56.3	+1.9	No
		PM	55.1	56.4	+1.3	No
	South of Wardlow Road	AM	60.6	60.6	0.0	No
		PM	62.2	62.3	+0.1	No
6	North of Spring Street	AM	60.4	60.6	+0.2	No
		PM	62.7	62.9	+0.2	No
	South of Spring Street	AM	61.2	61.3	+0.1	No
		PM	63.9	64.0	+0.1	No
<b>Pacific Place</b>						
3	North of Wardlow Road	AM	61.9	62.1	+0.2	No
		PM	62.1	62.2	+0.1	No
	South of Wardlow Road	AM	63.4	63.5	+0.1	No
		PM	64.2	64.2	0.0	No
<b>Long Beach Boulevard</b>						
4	North of Wardlow Road	AM	59.1	59.2	+0.1	No
		PM	52.9	53.0	+0.1	No
	South of Wardlow Road	AM	57.1	57.1	0.0	No
		PM	43.5	43.9	+0.4	No
<b>Atlantic Avenue</b>						
5	North of Wardlow Road	AM	57.6	57.6	0.0	No
		PM	59.5	59.5	0.0	No
	South of Wardlow Road	AM	57.3	57.2	0.0	No
		PM	59.2	59.2	0.0	No
<b>Spring Street</b>						
6	East of Magnolia Avenue	AM	59.8	59.9	+0.1	No
		PM	62.8	62.8	0.0	No
	West of Magnolia Avenue	AM	55.1	55.1	0.0	No
		PM	57.8	57.5	0.0	No
7	East of Pacific Avenue	AM	62.5	62.5	0.0	No
		PM	64.9	64.9	0.0	No
	West of Pacific Avenue	AM	59.8	59.9	+0.1	No
		PM	62.8	62.8	0.0	No
<b>Pacific Avenue</b>						
7	North of Spring Street	AM	62.6	62.6	0.0	No
		PM	63.9	64.0	+0.1	No
	South of Spring Street	AM	62.3	62.3	0.0	No
		PM	63.7	63.8	+0.1	No

Source: Based on Traffic Impact Analysis for the Integral Communities River Park Residential Project, Fehr and Peers, dated March 2021. Roadway noise model results are provided in **Appendix 4.K.4**.

## 8. MITIGATION MEASURES

### MM N-1 Construction Noise

Prior to issuance of demolition, grading and/or building permits, the project applicant shall incorporate the following practices into the construction contract agreement to be implemented by the construction contractor during the entirety of all construction phases:

- Install temporary noise barriers that reduce sound at receptors;
- For any idling that is expected to take longer than five minutes, the engine shall be shut off;
- All equipment shall be equipped with optimal muffler systems;
- Locate staging areas as far away from sensitive receptors as feasible;
- Locate stationary noise sources as far away from sensitive receptors as feasible;
- Enclose stationary noise sources, such as diesel-or gasoline-powered generators, with acoustical barriers where necessary and required;
  - If stationary equipment cannot be enclosed within a shed or barrier, such equipment must be muffled and located at least 100 feet from sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.
- Impact tools (i.e., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust and external jackets shall be used where feasible to lower noise levels. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible. Additionally, use of “quiet” pile driving technology (such as auger displacement installation), where feasible in consideration of geotechnical and structural requirements and conditions shall be considered.
- Modifying equipment, such as dampening of metal surfaces or other redesign to minimize metal-to-metal impacts.

## 9. LEVEL OF SIGNIFICANCE AFTER MITIGATION

As shown in **Table IV.K-11**, when considering the existing noise environment and the absolute noise levels during construction activities, noise levels would be below the FTA criteria threshold of 90 dBA (Leq-1hour) during the daytime period for residential uses. However, a 10 dBA change is subjectively heard as approximately doubling in loudness and can cause adverse response. Construction noise levels during the daytime period would result in maximum 26.7 dBA above ambient at the residential uses to the east (Site 3). Construction noise levels would be required to be reduced by approximately 16.7 dBA. Consistent with the Strategy No. 5 of the City's Draft General Plan Noise Element, **Mitigation Measure (MM) N-1** includes implementation of best practices to reduce impacts of noise from industrial sources. Construction best management practices are intended to prevent the use of non-standard construction equipment, unnecessary idling, equipment that is not appropriately muffled, and not to increase overall construction noise, in general, during allowable hours.

Implementation of **MM N-1** would require the use of optimal muffler systems that would reduce construction noise levels by approximately 10 dB or more.<sup>19</sup> Modifications such as dampening of metal surfaces or the redesign of a particular piece of equipment can achieve noise reduction of up to 5 dBA.<sup>20</sup> Temporary abatement techniques such as the use of a noise barrier can achieve a 5-dBA noise level reduction when it is tall enough to break the line-of-sight to the receiver. Moving stationary equipment away from sensitive receptors will reduce noise levels at the receptor as every doubling of distance will reduce noise by 4 to 6 dBA. Thus, implementation of **MM N-1** construction noise levels would be reduced by approximately 24 dBA and will not increase ambient noise levels by more than 10 dBA.

As such construction noise impacts would be less significant with mitigation.

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19 FHWA, *Special Report – Measurement, Prediction, and Mitigation*, updated June 2017.  
[https://www.fhwa.dot.gov/Environment/noise/construction\\_noise/special\\_report/hcn04.cfm](https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm). Accessed April 2021.

20 FHWA, *Special Report—Measurement, Prediction, and Mitigation*, updated June 2017, accessed July 2019,  
[https://www.fhwa.dot.gov/Environment/noise/construction\\_noise/special\\_report/hcn04.cfm](https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm).

### 1. INTRODUCTION

This section of the Draft EIR provides a discussion of existing conditions and applicable laws and regulations related to recreation facilities, and analysis of potential effects from implementation of the proposed Project.

### 2. ENVIRONMENTAL SETTING

#### Existing Conditions

##### *Regional Facilities*

The proposed Project Site is located in the City of Long Beach (City) in Los Angeles County (County). According to the Long Beach General Plan Open Space and Recreation Element, a regional park must be a minimum of 175 acres and accessibly to communities within a ½ hour drive time.<sup>1</sup> By this definition, the City holds two regional parks including El Dorado Park and beach property. El Dorado Park consists of 401 “regional use acres” and multiple amenities including an activity center, bicycle trails, and a nature center.

##### *Local Facilities*

The City includes a wide variety of recreational space and activities available to the public. Recreational amenities in the City include 92 parks, 26 community centers, 5 City-owned golf courses, 5 swimming pools, and 247 acres of public beaches spanning 11 miles of shoreline;<sup>2</sup> the total recreational park space acreage for the City consists of 2,750 acres.<sup>3</sup> There are also three marinas owned and operated by the City: Rainbow Marina, Shoreline Marina, and the Alamitos Bay Marina.<sup>4</sup> The downtown Rainbow Marina is the smallest with 86 boat slips, Shoreline Marina has 1,744 boat slips, and Alamitos Bay Marina is the largest with 1,967 boat slips.<sup>5</sup>

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- 1 City of Long Beach, General Plan, Open Space and Recreation Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/open-space-and-recreation-element>. Accessed March 2021.
  - 2 City of Long Beach, General Plan, Open Space and Recreation Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/open-space-and-recreation-element>. Accessed March 2021.
  - 3 City of Long Beach, General Plan, Land Use Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/lueude/land-use-element-final-adopted-december-2019>. Accessed March 2021.
  - 4 City of Long Beach, General Plan, Open Space and Recreation Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/open-space-and-recreation-element>. Accessed March 2021.
  - 5 Long Beach, General Plan, Open Space and Recreation Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/open-space-and-recreation-element>. Accessed March 2021.

Equestrian, bicycle, walking, and skating trails can also be found throughout the City. An equestrian trail is located adjacent to the Los Angeles River, immediately west of the Project Site. Additionally, bicycle and pedestrian trails can be found along the Los Angeles River. An estimated 64 miles of bikeways are located throughout the City, 35 of which have been separated from any roadway traffic. Shoreline, river, and park trails are available to pedestrians, bicyclists, as well as skaters.

As stated in the City's General Plan Open Space and Recreation Element, the City of Long Beach's goal for providing adequate park and recreational facilities to its residents is 8 acres per 1,000 residents. According to the U.S. Census, the estimated population of the City of Long Beach was 462,628 in the year 2019 <sup>6</sup> and the City documented over 2,750 acres of recreation space in the same year. This means that the current ratio is 5.9 acres per 1,000 residents which is below the City's goal.

### ***Project Site and Surrounding Area***

The 20-acre Project Site is currently adjacent to two public parks: the Baker Street Park (1.23 acres) to the north and the Wrigley Heights Dog Park (1.9 acres) to the south (see **Figure IV.L-1: Project Site and Neighboring Parkland**). There are currently no recreational facilities on the Project Site, but the two public parks located adjacent to the proposed Project Site are available to the surrounding residential community. The Baker Street Park includes picnic areas, a playground, and a walking path. The Wrigley Heights Dog Park features the dog run with an entry area for unleashing or holding dogs when entering or leaving the park, benches, and a water fountain.

A third public park, Los Cerritos Park (8 acres), is located approximately 1.3 miles northeast from the Project Site and includes a playground, two tennis courts, picnic areas and a restroom building. This park is located directly north of Los Cerritos Elementary School. There are also existing equestrian, bicycle, and pedestrian trails that run along the LA River adjacent to the west side of the Project Site.

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6 U.S. Census Bureau, Quick Facts, Long Beach City, California, <https://www.census.gov/quickfacts/fact/table/longbeachcitycalifornia/PST045219>. Accessed March 2021.



SOURCE: Google Earth - 2021

FIGURE IV.L-1

### 3. REGULATORY SETTING

#### ***California Government Code, Section 66477 (Quimby Act)***

The Quimby Act authorizes the legislative body of a city or county to require the dedication of land or to impose fees for park or recreational purposes as a condition of the approval of a tentative or parcel subdivision map, if specified requirements are met.<sup>7</sup> The act states that the dedication of land or the payment of fees shall not exceed the amount necessary to provide three acres of park area per 1,000 persons residing within a subdivision subject to this section, unless the legislative body decides to increase the amount to a higher standard such as 5 acres per 1,000 residents.

#### ***State Public Park Preservation Act***

The 2019 California Public Resources Code includes guidelines for the State's Parks and Monuments. This division outlines regulations that aim to promote and regulate the use of the State park system in a manner that conserves the scenery, natural and historic resources, and wildlife for the enjoyment of future generations.<sup>8</sup> Under PRC Division 5. Parks and Monuments, Chapter 2.5, cities, counties, or public agencies are restricted from acquiring any land that is currently used as a public park for any reason other than use as a public park, unless compensation is provided or an alternative location for a public park is identified.

#### ***City of Long Beach General Plan***

The Long Beach General Plan is a policy document that establishes the goals and policies of the City. The Land Use Element, Housing Element, Open Space and Recreation Element within the General Plan describe the existing condition in the communities that the City serves and what future needs would be required to support projected local population growth.<sup>9</sup> The City Council adopted the most recent Housing Element in 2014 and the most recent Open Space and Recreation Element in 2002. The City of Long Beach General Plan describes multiple policies that enforce core goals for parks and recreation spaces throughout the City.

The following policies contained in the Land Use, Housing, Open Space, and Urban Design Elements describe core goals for parks and recreation spaces throughout the city and are relevant to the proposed Project:

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7 Assembly Bill 1191, Ch. 276, Quimby Act.

8 Public Resources Code, Division 5 Parks and Monuments, Ch. 1 State Parks and Monuments, Article 1, sec. 5001.1.

9 City of Long Beach, General Plan, Housing and Open Space Elements, <http://www.longbeach.gov/lbds/planning/advance/general-plan/>. Accessed March 2021.

## Land Use Element

- Goal 4:** Support Neighborhood Preservation and Enhancement
- Goal 7:** Provide Reliable Public Facilities and Infrastructure to Encourage Investment
- Goal 8:** Increase Access to, Amount of and Distribution of Green and Open Spaces

## Housing Element

- Policy 3.5:** Continue to improve streets and drainage, sidewalks and alleys, green spaces and parks, street trees, and other public facilities, amenities, and infrastructure.

## Open Space Element

- Goal 4.2:** Achieve a ratio of 8.0 acres of publicly owned recreation open space per 1,000 residents.
- Policy 4.1:** Create additional recreation open space and pursue all appropriate available funding to enhance recreation opportunities.
- Policy 4.6:** With the help of the community, plan and maintain park facilities at a level acceptable to the constituencies they serve.
- Policy 4.8:** In creating additional recreational opportunities, priority shall be given to areas of the City that are most underserved.
- Policy 4.9:** Encourage the provision of the non-City-owned recreation resources to supplement what the City is able to provide.
- Policy 4.10:** Require all new developments to provide usable open space tailored to the recreational demands they would otherwise place on public resources.
- Policy 4.13:** Give special consideration to handicapped and disadvantaged residents in accessing public recreation resources.
- Policy 4.14:** Develop an open space linkage/trail plan.

## Urban Design

**Policy UD 30-1:** Preserve and enhance access to existing open space through improvements to existing facilities and wayfinding programs for new and existing open spaces.

**Policy UD 30-4:** Encourage projects to integrate required open space with a beneficial relationship to the public realm (e.g., connecting a paseo to the sidewalk, providing a layered landscape design and private patios along the sidewalk, connecting an internal courtyard visually or physically to the sidewalk).

### ***City of Long Beach Parks, Recreation, and Marine Strategic Plan***

The City of Long Beach Parks, Recreation, and Marine (PRM) Strategic Plan was first developed in 1999. The goal of the Parks, Recreation, and Marine Strategic Plan is to direct the Department’s recreational programming, park and facility development and improvement, and administrative decisions over a period of ten years. The most recent 2003 PRM plan includes the following goals:<sup>10</sup>

- **Goal 1:** Ensure Open Space Parks and Recreational Facilities Meet Community Needs.
- **Goal 2:** Ensure City Parks and Recreational Facilities Provide Positive Experience and Image.

### ***Long Beach Municipal Code***

The Long Beach Municipal Code is a City adopted set of codes that establish and organize the many facets of City-wide activities; this includes:

*Establishment of certain offices and boards; the conduct of City government; organization to cope with disasters; fire prevention; police and traffic regulation; public safety; public welfare; public works; buildings and signs; prohibition of certain defined acts, and punishment for violation of Code provisions; regulation, control and licensing of businesses, trades, professions and other occupations; health and sanitation regulations; oil production; use of land in the City; municipal gas service and rates; regulation of City streets; operation of public facilities; and other matters of general interest.*<sup>11</sup>

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10 City of Long Beach Department of Parks, Recreation, & Marine, Strategic Plan Executive Summary (2003), [http://www.longbeach.gov/globalassets/park/media-library/documents/business-operations/about/strat\\_plan\\_exec\\_summ](http://www.longbeach.gov/globalassets/park/media-library/documents/business-operations/about/strat_plan_exec_summ). Accessed March 2021.

11 City of Long Beach Municipal Code, Ch. 1, sec. 1.04.010.

Under Title 18, Chapter 18 of the LBMC, a park impact fee is imposed on new residential developments to assure City parkland and recreational facility standards are met with respect to additional needs created by a proposed Project.<sup>12</sup> The purpose of this fee is to fund parkland acquisition and recreation improvements incurred by the City.

Additionally, Chapter 21 section 21.31.340, includes residential development standards based on required park space. This section states that “each PUD shall provide a minimum of fifteen percent of the site area as common usable open space, in functional, active recreation area(s).”

### ***Other Recreation Facility Planning Studies***

#### **Long Beach RiverLink**

In January 2003, the Department of Parks, Recreation, and Marine contracted with the San Pedro Bay Estuary Project, a local nonprofit agency, to manage a study of the opportunities to create a continuous greenway along the east bank of the Los Angeles River. The west bank of the Los Angeles River was not included in the study due to the close proximity of the 710 Freeway, and the discussions that were taking place regarding its potential redesign. The plan was presented to the Parks and Recreation Commission in December 2004 as the San Pedro Bay Estuary Project’s final report. It was approved in concept by the Parks and Recreation Commission in April 2005, with staff suggested revisions and recommendations.<sup>13</sup>

In 2007, the Department of Parks, Recreation, and Marine created an updated document based on the previous concepts provided by the San Pedro Bay Estuary Project. The Riverlink Report provided a vision of an integrated open space system and a framework to connect west side neighborhoods, and greater Long Beach, with the Los Angeles River. On February 15, 2007, the Parks and Recreation Commission approved RiverLink in concept, and recommended that the study be forwarded to the Planning and Building Department for inclusion in the General Plan update. The goals of Riverlink are:

- To identify areas for the acquisition of additional open space.
- To identify ways to connect city residents to the Los Angeles River.
- To identify locations along the Los Angeles River where the native habitats could be restored.
- To improve the aesthetics of the Los Angeles River and the City.

The RiverLink plan has four main components: Destinations, Gateways, Pathways, and Connections. Each of these planning concepts is set forth below.

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<sup>12</sup> City of Long Beach Municipal Code, Title 18, Ch. 18.18 Park and Recreation Facilities Fees.

<sup>13</sup> City of Long Beach, Department of Parks, Recreation and Marine, Long Beach RiverLink. February 2007.

*Destinations:* Destinations are places where accessible recreational open space or habitat restorations are located. The Project site is located within Destination 7: Wrigley Heights – South. Also located within Destination 7 are the Los Angeles River Right-of-Way and two City-owned parcels, Wrigley Heights Dog Park and Baker St. Park. The RiverLink Plan recommends that as much of the area become an open space destination as possible, suggesting recreational components such as a restored wetland, riparian woodland, neighborhood park, pedestrian and bike paths, and other features.

*Gateways:* Gateways are those points where a visitor begins the journey along a pathway towards a connection or destination. The closest suggested Gateway marker is located at approximately Pacific Ave. and Wardlow Road. This location is located outside of the Project area, and this aspect of the RiverLink Plan is not directly applicable.

*Pathways:* Pathways facilitate movement in and around the neighborhoods to the Los Angeles River. There are two types of Pathways in RiverLink: the Los Angeles River Trail (LARIO trail) and CityLinks. CityLinks are bicycle and pedestrian pathways that connect neighborhoods to the LARIO trail. A Citylink is proposed surrounding Destination 7, connecting back to the Wardlow Road Class 2 (on-street) bicycle path. The recommended CityLink includes lands outside of the Project area and this aspect of the RiverLink Plan is not directly applicable.

*Connections:* Connections link pathways together. The RiverLink Plan identified Connections providing access to the LARIO trail or the Destinations. The closest Connections to the Project area are north of the 405 freeway and at approximately Spring St. and Pacific Ave. As these Connections are well outside of the Project area, this aspect of the RiverLink Plan is not applicable.

## **Los Angeles River Master Plan**

Los Angeles County is updating the LA River Master Plan, a comprehensive approach covering all 51 miles of the LA River. The effort was launched to update the original 1996 Master Plan, synthesizing more recent ideas for portions of the River and bringing a comprehensive vision to the transformation of the LA River. As part of this effort, the County of Los Angeles, through the Department of Public Works, is the Lead Agency and is preparing a Program Environmental Impact Report (PEIR) to evaluate any potential impacts to the environment pursuant to the CEQA.<sup>14</sup> The LA River Master Plan includes the LA River Trail that runs along the eastern side of the river and also identifies the potential for park space at the Project site.

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14 Los Angeles County Public Works. Los Angeles River Master Plan: Program Environmental Impact Report. <https://pw.lacounty.gov/swq/peir/>. Accessed May 4, 2021.

## Open Space Acquisition Study

In February of 2021, the Long Beach City Council requested the City Manager to study the feasibility of acquiring open space for park development along the Los Angeles River consistent with the Long Beach RiverLink Plan and the Lower LA River Master Plan. The Park Acquisition Feasibility Report, completed in April 2021, identified properties that may be opportunity sites that could be further considered for possible acquisition, along with information on possible acquisition methods and funding sources that may be available for park acquisition.<sup>15</sup> The goal of this study was to identify areas within the western Long Beach that were most feasible to develop park space in order to improve park equity and increased quality of life for all residents. As the Park Acquisition Feasibility Report built upon the concepts of the RiverLink Plan, the Project site, as well as sites to the north and south along the east side of the river, were identified in the report.

## 4. ENVIRONMENTAL IMPACTS

### Thresholds of Significance

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may have a significant impact related to recreation if it:

**Threshold REC-1:**        **Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**Threshold REC-2:**        **Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

## 5. METHODOLOGIES

The analysis in this section addresses the impact of the Project on recreational facilities within the City . This assessment is based on the City's planning standards for recreation facilities (i.e., parkland per capita ratio) and the increase in population that would result from the Project. Analysis of existing and proposed

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<sup>15</sup> City of Long Beach. Park Acquisition Feasibility Report. April 2021. <https://www.longbeach.gov/globalassets/city-manager/media-library/documents/memos-to-the-mayor-tabbed-file-list-folders/2021/april-5--2021---open-space-acquisition-study> . Accessed November 2021.

recreational facilities uses the City's existing ratio of park acreage per thousand residents to calculate the impact of the proposed Project.

## 6. PROJECT IMPACTS

**Threshold REC-1: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

### ***Construction***

During construction of the proposed Project, short-term related effects would occur including a temporary population increase due to construction workers. This increase is anticipated to be negligible since workers for construction projects typically would not relocate to a project location due to the varying nature of their work locations. Therefore, it is not expected to increase the local population surrounding the Project Site. Workers are also unlikely to utilize the nearby recreational facilities as the workers would typically commute to work on the Project Site and leave the local area after the workday. Without contributing to local population increase or utilizing Project adjacent recreational resources, construction is not anticipated to substantially increase usage of local recreational resources and would not contribute to substantial physical deterioration of existing recreational resources due to population increase.

Additionally, construction activities would not encroach on adjacent park facilities and the LA River trails or dramatically impact the utility of nearby recreational facilities, which would render the facilities unusable during the construction duration or introduce substantial physical deterioration to the recreational facilities. Construction of the proposed Project would maintain approximately 8 feet from the edge of the private property line and would not reach the edge of the LA River bike trail. Any and all construction impacts to nearby recreational facilities would be temporary in nature and the impacts would cease after the construction activities are complete. Returning all conditions of the adjacent recreational facilities to its original state of operation. Therefore, construction activity impacts to nearby parks including the adjacent Baker Street Park northeast of the Project Site and Wrigley Heights Dog Park southeast of the Project Site would be less than significant.

### ***Operation***

Development of the Project would generate an estimated 624 residents and provide 5-acres of recreational park space. The Homeowner's Association for the proposed residential development will maintain the 5-acres of active park space to the north of the Project Site, which would introduce trails connecting to the existing Baker Street Park and the realigned Baker Street to be used by Long Beach's Public Works' Department for public facility maintenance. This park space and recreational area would be

open to the public and contain established walking trails, look-out points, an open grass area, a butterfly garden, and exercise equipment. The grass area would be sufficient in size for use as a soccer field or for other active sports activities. The sidewalks within the residential development would connect to the park space area trails, creating a seamless pedestrian connection between the residential complex and the recreational park space to the north.

The recreational facilities provided by the Project would be consistent with the recreational facilities' goal of the City consisting of 8 acres of park land per 1,000 residents.<sup>16</sup> The proposed Project's recreational park space to resident ratio would be approximately 8 acres per 1,000 residents which would adequately support the recreational needs of the additional residential population and existing population. Operation of the proposed park space would contribute to the City's park space deficit and also provide additional space for local residents to participate in activities. Additionally, the proposed Project exceeds the 15 percent minimum total active park space requirement by setting aside approximately 5 acres of Project area as active park space, achieving approximately 24 percent of active park space at the site.<sup>17</sup> Based on the park land to resident ratio provided by the proposed Project which is above the park land to ratio existing in the City, the proposed Project is not anticipated to increase use or contribute to substantial physical deterioration of existing recreational facilities.

Additionally, in accordance with the Quimby Act, the City assesses park space development fees for new residential development. Pursuant to Chapter 18.18 of the LBMC, all residential developments are required to pay park fees prior to the issuance of a certificate of occupancy. This fee is intended to be used for the acquisition, improvement, and expansion of public parks and/or recreational facilities. Pursuant to Chapter 18.18.100 of the LBMC, any applicant who contributes improvements to the City for the acquisition of park land or the construction of recreation improvements, may be eligible for a credit for such contribution against the park fee otherwise due. With the park space and recreational facilities included in the proposed Project and payment of park fees as required, impacts to park facilities during operation would be less than significant.

Considering the short-term and less than significant impacts on nearby parks and trails from construction, the ratio of park space provided by the proposed Project during operation, and the park fees required by the State and local guidelines there would be less than significant impacts to recreational facilities.

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16 Long Beach, General Plan, Open Space and Recreation Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/open-space-and-recreation-element>. Accessed March 2021.

17 LBMC, Ch. 21, Section 21.31.340 (F).

**Threshold REC-2: Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

The Project includes the proposed improvement of a 5-acre park space area north of Baker Street, immediately west of the City's existing Baker Street Park. There is also a clubhouse and pool proposed at the southern end of the residential development. The proposed park space is within the boundaries of the Project Site which is currently vacant. The site contains primarily scattered vegetation with few native plants and wildlife. For details regarding biological resources on site, please refer to **Section 4.C: Biological Resources**.

**Construction**

Project construction would include site clearing, bioremediation, demolition and grading, utility installation, and finally housing construction over a period of 44 months. The water quality treatment facilities previously functioning on the site were removed in 2001. Remediation of the contaminated soil on site has been ongoing since 2001 and the soil in the settling basins have been regularly tilled as part of the remediation activities. In compliance with a Los Angeles Regional Water Quality Control Board (LARWQCB), an approved Remedial Action Plan (RAP) would be required prior to commencement of construction activities. Implementation of the approved RAP would treat the remaining contaminated soil on site. Additionally, it is proposed that an engineered cap be constructed over the existing soil on site over the 5 acres proposed for park space development. The engineered cap would prevent any residual contaminants from coming into contact with future users of the park space.

Construction activities have the potential to introduce airborne sediment and soil, stormwater runoff, and noise to the local area. However, Best Management Practices (BMPs) would be in place to ensure that any impacts to nearby recreational facilities would be reduced to the extent feasible. BMPs implemented during the construction duration would include, but are not limited to Tier 4 construction equipment, wind screens, watering exposed soil on site, using equipment mufflers and shields on exhaust ports, not simultaneously operating numerous pieces of heavy-duty off road construction equipment, among other measures. These measures would reduce the potentials impacts to users of the adjacent parks and LA River trails during construction activities. For details regarding potential project construction air quality, stormwater, and noise impacts please refer to **Sections 4.B: Air Quality, 4.I: Hydrology And Water Quality, and 4.J: Noise**.

Lastly, no new construction or expansion of existing park facilities beyond the proposed park space, would be required by the implementation of the proposed Project. As such, implementation of BMPs would reduce any impacts to recreational facilities to less than significant.

## Operation

As discussed above, the Project is estimated to generate approximately 624 residents and the proposed park space would be sufficient to support the estimated increase in residents. The proposed park space area would connect to the nearby Baker Street Park to the east and include similar aesthetic elements.

As discussed above, the City's RiverLink Plan provided guidance and recommendations for open space planning by the City and led to the Open Space Acquisition Study. These studies identifies the Project Site as a potential location for open space along the river corridor. The proposed Project includes an approximately 5-acre park to the north of the proposed residential development, which includes connected pathways to surrounding parks. Public amenities are proposed in the proposed park that may include a youth soccer field, walking trails, look-out points, a butterfly garden, and exercise equipment. This feature of the Project is consistent with the RiverLink Plan and Open Space Acquisition Study.

The LBMC includes noise standards for areas within District 1<sup>18</sup> or predominantly residential uses with other land use types. According to these standards, daytime noise levels must not exceed 50 dBA (7:00 AM – 10:00 PM) and nighttime levels cannot exceed 45 dBA (10:00 PM – 7:00 AM).<sup>19</sup> It is not anticipated that a significant increase in ambient noise would occur due to the similar park space uses within the vicinity of the Project site. Activities within the park space could include running and walking on designated trails, soccer games, and exercise using provided parcourse equipment. Operational noise levels attributed to activities within the recreational area would be confined to the hours of operation of the park and would be comparable to existing nearby noise levels from similar uses. These activities would also not be increased to a level that would be perceptible to existing residents. Refer to **Section IV.J Noise** for more analysis on noise impacts.

Vegetation included in the landscape design would fit into the overall character of the surrounding landscape. Lighting would be provided throughout the park space area for security, wayfinding, and pedestrian paths safety. In accordance with City guidelines, on-site lighting would be shielded to reduce light levels onto off-site uses as well as prevent light aimed upwards to remain in compliance with Dark Sky requirements.<sup>20</sup> Lighting for the proposed Project would be similar to the surrounding area and those existing at the Baker Street Park and would not obstruct any views. The proposed recreational area would be similar in terms of function and views as the surrounding recreational facilities and would not add additional impacts that are not already present in the area.

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18 The Project Site is designated as a District 4 area of the City, which applies to majority industrial uses. However, the Project Site is bordered by areas designated as District 1, which have more stringent noise standards than District 4.

19 LBMC, Ch. 8.80, 8.80.160 – Exterior noise limits.

20 LBMC, Ch. 21, Section 21.41.259 Parking Areas – Lighting.

The proposed park would increase the parkland to population ratio as the addition of 5-acres of park space is well above the minimum requirement of 15 percent, and the Citywide 5 add to the surrounding resources within the area. The proposed park would add to the local availability of park space, further reducing the Project impacts to the surrounding area. Considering the short-term construction related impacts and the Project's consistency with the City's parkland to population requirement, the expansion of recreational activities would not have an adverse physical effect on the surrounding environment.

The operation of the park space would not significantly increase noise or impact the surrounding view as the elevation of the parkland development would remain similar to its current elevation and comparable park uses at the adjacent Baker Street Park already exists.

## 7. CUMULATIVE IMPACTS

A cumulative analysis for recreational facilities evaluates whether impacts of the proposed Project and related projects, when taken as a whole, would have a significant environmental impact on recreational resources. The geographic area for cumulative analysis of recreational resources is the City of Long Beach. The City is located in a highly developed urban setting with most new development occurring as in-fill development, such as the proposed Project. As described above, the proposed 5-acre recreational facility attached to the Project Site would be adequate for serving the additional population growth associated with the proposed development. The proposed residential and park space development would have a less than significant effect on the existing recreational facilities in the City.

Additionally, the City is looking to expand local recreational facilities with plans to develop a new park immediately north of the proposed Project and north of the I-405. The 11-acre site (APN 7140014940) is located north of I-405 and runs east of the Los Angeles River. The property is currently owned by Los Angeles County. The City is planning to work with the County to development the 11 acres site into a public park.<sup>21</sup> The County has halted any other plans for this property in order to discuss with the City the potential for future open space. Staff have begun examining potential funding sources, which could include grants and support from other State and Federal sources.

The proposed Project would have a less than significant impact on existing recreational facilities by providing approximately 8 acres per 1,000 residents of park space to the local community, higher than the existing park land to resident ratio and consistent with the City's recommended park land to resident ratio. In addition, the payment of park in-lieu fees, the dedication of parkland as required by the Quimby Act,

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21 City of Long Beach. Park Acquisition Feasibility Report. April 2021. <https://www.longbeach.gov/globalassets/city-manager/media-library/documents/memos-to-the-mayor-tabbed-file-list-folders/2021/april-5--2021---open-space-acquisition-study> . Accessed May 2021.

and the CEQA evaluation on a Project-by-Project basis would ensure City's long-term demand for parks is met over time. Based on the analysis provided, the proposed Project, combined with other reasonably probable future related developments would not result in a significant cumulative impact related to recreational resources.

## **8. MITIGATION MEASURES**

The proposed Project would have a less than significant impact on recreational resources. Therefore, no mitigation measures would be required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed Project would have a less than significant impact on recreational resources. Therefore, no mitigation measures would be required.

### 1. INTRODUCTION

This section describes the existing transportation conditions, applicable laws and regulations associated with transportation, and analysis of the potential effects resulting from implementation of the Project. Information from the Traffic Impact Analysis, prepared by Fehr & Peers dated March 2021 (**Appendix IV.M.1**), is incorporated into this section.

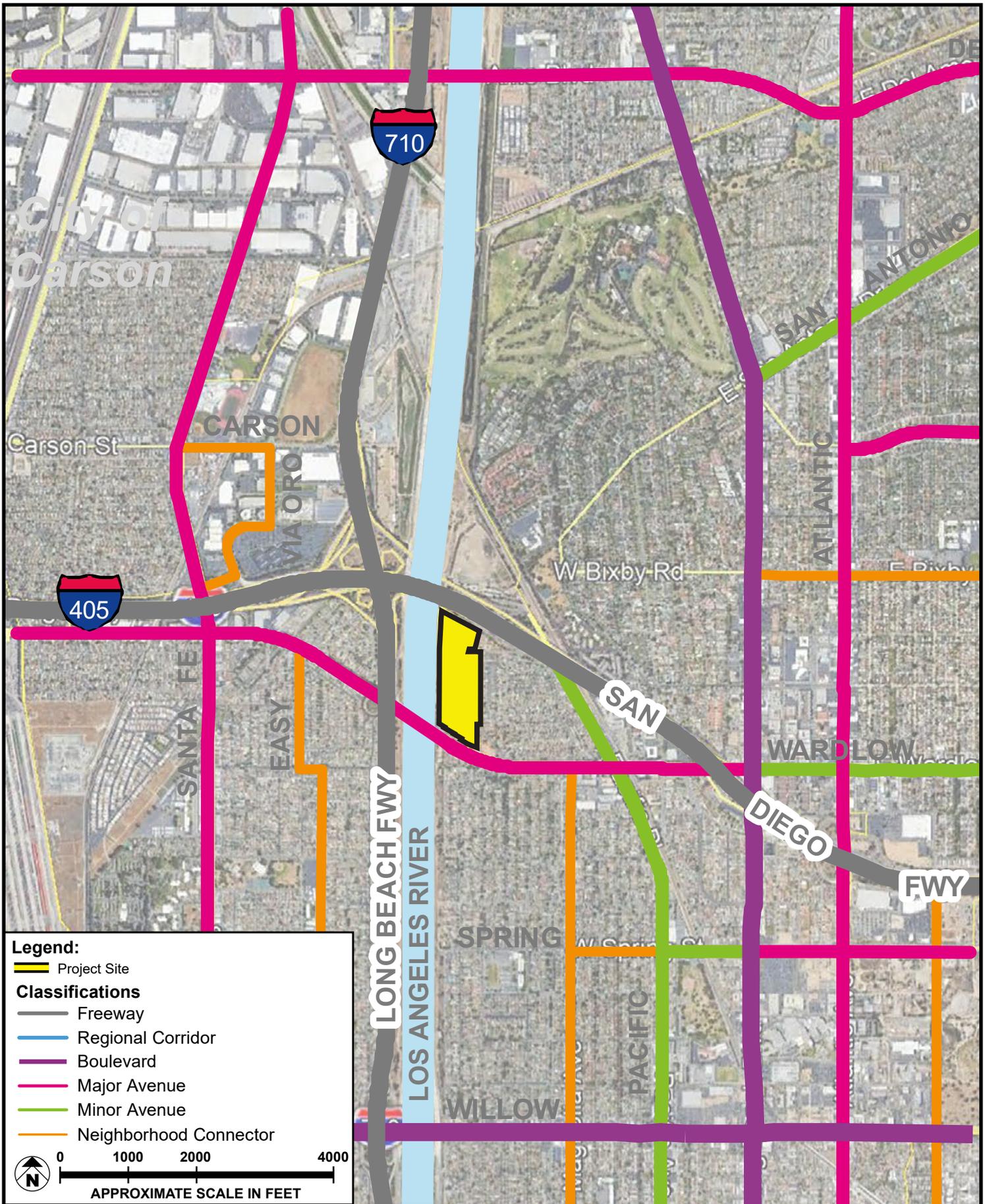
### 2. ENVIRONMENTAL SETTING

#### Existing Conditions

##### *Regional Access*

Primary regional access to the Project Site is provided by Interstate 405 (I-405) and Interstate 710 (I-710). The roadway network in the vicinity of the Project Site is shown in **Figure IV.M-1: Local Highway and Roadway Connections**. The Project Site is bounded by I-405 on the north, Golden Avenue on the east, the Los Angeles River on the west, and Wardlow Road to the south. The I-710 ( Long Beach Freeway) connects from Harbor Scenic Drive near Wilmington north along the Los Angeles River to East Los Angeles. It continues north away from the river before ending near Interstate 10 (I-10) at Alhambra. The I-405 is the main north/south freeway in the western portion of Los Angeles County.

Additionally, the Los Angeles (LA) Metro also provides bus and rail service in the vicinity of the Project Site. The Metro rail system operates exclusively within LA County and includes a transportation hub located in Downtown Los Angeles at Union Station. LA Metro bus routes 60 and 2020, as well as the LA Metro Blue/A Rail line serve the Project vicinity. LA Metro Rail provides a connection between Downtown Long Beach and Downtown Los Angeles.



SOURCE: Mobility Plan - 2020; Google Earth - 2021

FIGURE IV.M-1

## Highways and Local Streets

### Highways

**Interstate 405 (I-405)** is a major north-south highway that extends for seventy-two miles through Los Angeles and Orange Counties, from Irvine to the south and San Fernando to the north. It's also known as the northern portion of the San Diego Freeway. The number of lanes on the I-405 varies between 4 and 5 travel lanes in each direction. Access to the Project Site from I-405 is provided via North Pacific Place.

**Interstate 710 (I-710)** is a major north-south highway that extends for approximately 23 miles through Los Angeles County from the Port of Long Beach to the south and Alhambra/Pasadena to the north. It's also known as the Los Angeles River Freeway. The number of lanes on the I-710 varies between 3 and 4 travel lanes in each direction. The facility serves a large number of trucks and freight facilities, including the Ports of Los Angeles and Long Beach (or the San Pedro Bay Ports). Access to the Project Site from I-710 is provided via Wardlow Road.

### Local Streets

**Wardlow Road** is a four-lane undivided roadway west of Cherry Avenue and a four-lane divided roadway east of Cherry Avenue. Wardlow Road provides east–west connectivity between Cherry Avenue and Walnut Avenue. Wardlow Road also extends to the eastern portion of the Project Site, and bisects buildings 1 and 2, and terminates at the LGB airport. Wardlow Road continues just east of the Lakewood Boulevard. On-street parking is generally permitted on both sides of the street west of Cherry Avenue. The posted speed limit on Wardlow Road is 35 mph west of Cherry Avenue and 30 mph east of Cherry Avenue. Sidewalks are generally provided on both sides of the roadway within the Projects' vicinity. Crosswalks are generally provided at all signalized intersections. The City's Mobility Element designates Wardlow Road as a Major Avenue west of Long Beach Boulevard and a Minor Avenue east of Long Beach Boulevard.

**Magnolia Avenue** is a two-lane, north/south running avenue, with a shared left-turn center median. Magnolia Avenue, which provides on-street parking south of Wardlow Road, connects to the Wrigley Heights neighborhood north of Wardlow Road. The posted speed limit along Magnolia Avenue, south of Wardlow Road, is 35 mph. The adjacent land use of this section of Magnolia Avenue is primarily residential. The City's Mobility Element designates Magnolia Avenue as a Neighborhood Connector north of Pacific Coast Highway and a Minor Avenue south of Pacific Coast Highway.

**Pacific Place/Pacific Avenue** is a minor avenue that extends from Spring Street in the South (where it converts to Pacific Avenue) to the I-405/I-710 on-off ramps in the north. Pacific Place/Pacific Avenue is a four-lane roadway that runs parallel with the LA Metro light-rail A Line. On-street parking is provided along some of the segments, with a posted speed limit is 40 mph. At Wardlow Road, Pacific Place runs in a

northwest/southeast diagonal direction, with a horizontal roadway curvature as it approaches Spring Street to the south. The City's Mobility Element designates Pacific Place/Pacific Avenue as a Major Avenue south of Pacific Coast Highway and a Minor Avenue north of Pacific Coast Highway.

**Spring Street** is designated by the City's Mobility Element as a Neighborhood Connector west of Pacific Avenue, a Minor Avenue between Pacific Avenue and Long Beach Boulevard, and a Major Avenue east of Long Beach Boulevard. Between Long Beach Boulevard and Pacific Avenue there is an at-grade rail crossing for the LA Metro A Line with gates that stop traffic along Spring Street.

**Long Beach Boulevard** is a Regional Truck Route that runs adjacent to the I-710 corridor from Downtown Long Beach in the south to the 91 and 105 freeways in the north. There are on/off ramps for the I-405 freeway at Long Beach Boulevard & Wardlow Road. Long Beach Boulevard is primarily a four-lane Boulevard, that opens up to a six-lane roadway for a short section south and north of Wardlow Road. The City's Mobility Element designates Long Beach Boulevard as a Boulevard.

**Atlantic Avenue** is a four-lane boulevard that extends from Downtown Long Beach in the south to the 91 and 105 freeways in the north. There are on/off ramps for the I-405 freeway on Atlantic Avenue, south of Wardlow Road. The adjacent land uses along Atlantic Avenue in the study area is primarily commercial. The City's Mobility Element designates Atlantic Avenue as a Major Avenue.

### ***Site Access***

The Project Site is located in the Wrigley Heights community, bounded by Wardlow Road to the south, the Los Angeles River to the west, the I-405 freeway to the north, and Golden Avenue to the east. Existing access to the Site is provided at the intersection of Baker Street and Golden Avenue. The access is currently gated and is accessed occasionally by City maintenance vehicles. Baker Street is also designated as an additional access point for emergency vehicles.

## Intersections

The study area and analyzed intersections were determined based on trip generation, trip distribution, and trip assignment estimates developed for the proposed Project. Traffic operations were evaluated, for Site access and circulation purposes, at the following seven intersections in the vicinity of the Project Site (see **Figure IV.M-2: Project Study Area Intersection Locations**). The following study locations were selected in consultation with the City of Long Beach staff:

1. Santa Fe Avenue and Wardlow Road (signalized)
2. Magnolia Avenue and Wardlow Road (signalized)
3. Pacific Place and Wardlow Road (signalized)
4. Long Beach Boulevard and Wardlow Road (signalized)
5. Atlantic Avenue and Wardlow Road (signalized)
6. Magnolia Avenue and Spring Street (signalized)
7. Pacific Avenue and Spring Street (signalized)

## Public Transportation

Long Beach Transit (LBT) and LA Metro provide public transit services in the vicinity of the Project Site. Although Wardlow Road is classified as a Secondary Transit Route, there are no stops or routes fronting the Project Site. The nearest bus stop is located east of the Project Site at southeast Magnolia Avenue & Wardlow Road, where LBT Route 181 operates.

LA Metro provides bus and rail service in the vicinity of the Project Site. LA Metro bus routes 60 and 2020, as well as the LA Metro Blue/A Rail line. LA Metro Rail provides a connection between Downtown Long Beach and Downtown Los Angeles. The Wardlow A line station is approximately 0.5-mile east of the Project Site at Pacific Place & Wardlow Road. **Figure IV.M-3: Existing Transit Routes** illustrates the existing Metro transit, Metro Bus, and LB Transit routes in the Project vicinity.

## Public Transportation Site Access

Near the Project Site, at the Wardlow Metro Station on Pacific Place, is the Wardlow Station Bay 3. Bus Routes 181 and 182 operate at this Bay. LBT bus routes that serve routes in the vicinity of Project Site include the following:

- Route 192: This route operates daily via Santa Fe Avenue
- Route 131: This route operates daily along Wardlow Road, east of Pacific Place
- Route 181: This route operates daily via Magnolia Avenue

## Multimodal

### ***Bike***

The City has an extensive network of bicycle facilities consisting of 15 miles of bike routes, 19 miles of bike lanes, and 29 miles of bike paths. The City also has priority “8-to-80” bike facilities. Per the City’s 2040 Bicycle Master plan, these bikeways are designed so that anyone between the ages of 8 and 80 years of age can ride in the facility safely and comfortably. In addition to the on-street bicycle network, the City of Long Beach has over 60 miles of off-street bike and pedestrian paths within its boundaries. In total, the city has approximately 156 miles of bikeways. **Figure IV.M-4: Existing and Proposed Bikeways** shows the existing and proposed bikeways within the Project vicinity.

Bicycle facilities in the City of Long Beach are as follows:

- **Class I Bikeways (Bike Paths)**

Class I bicycle facilities are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be a separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.

- **Class II Bikeways (Bike Lanes)**

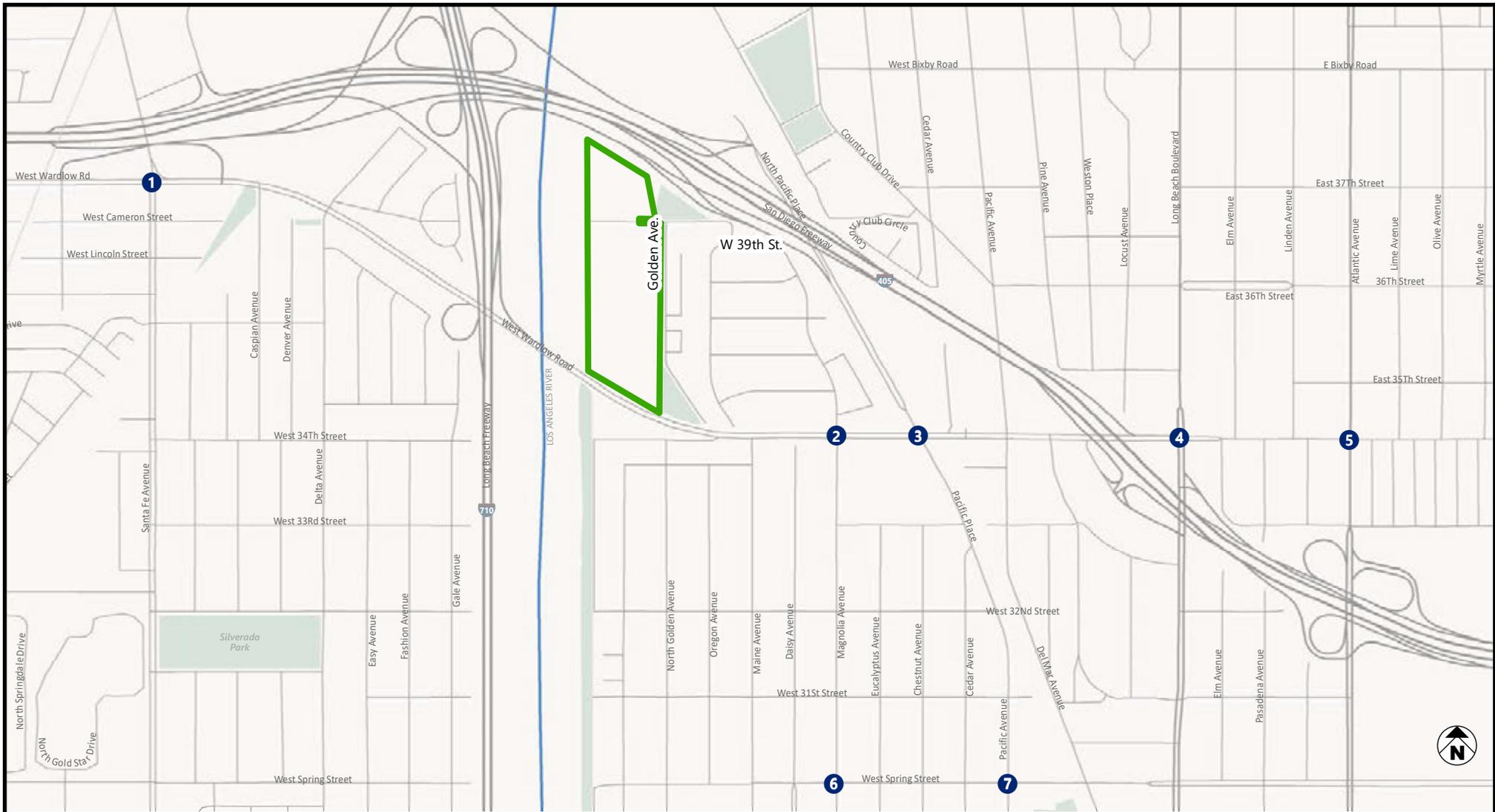
Class II bicycle facilities are striped lanes that provide bike travel and can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a bike lane adjacent to a parking lane can be four feet in width. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.

- **Class III Bikeways (Bike Routes)**

Class III Bikeways are streets providing for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage both by the side of the street and stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.

- **Class IV Bikeways (Cycle Tracks)**

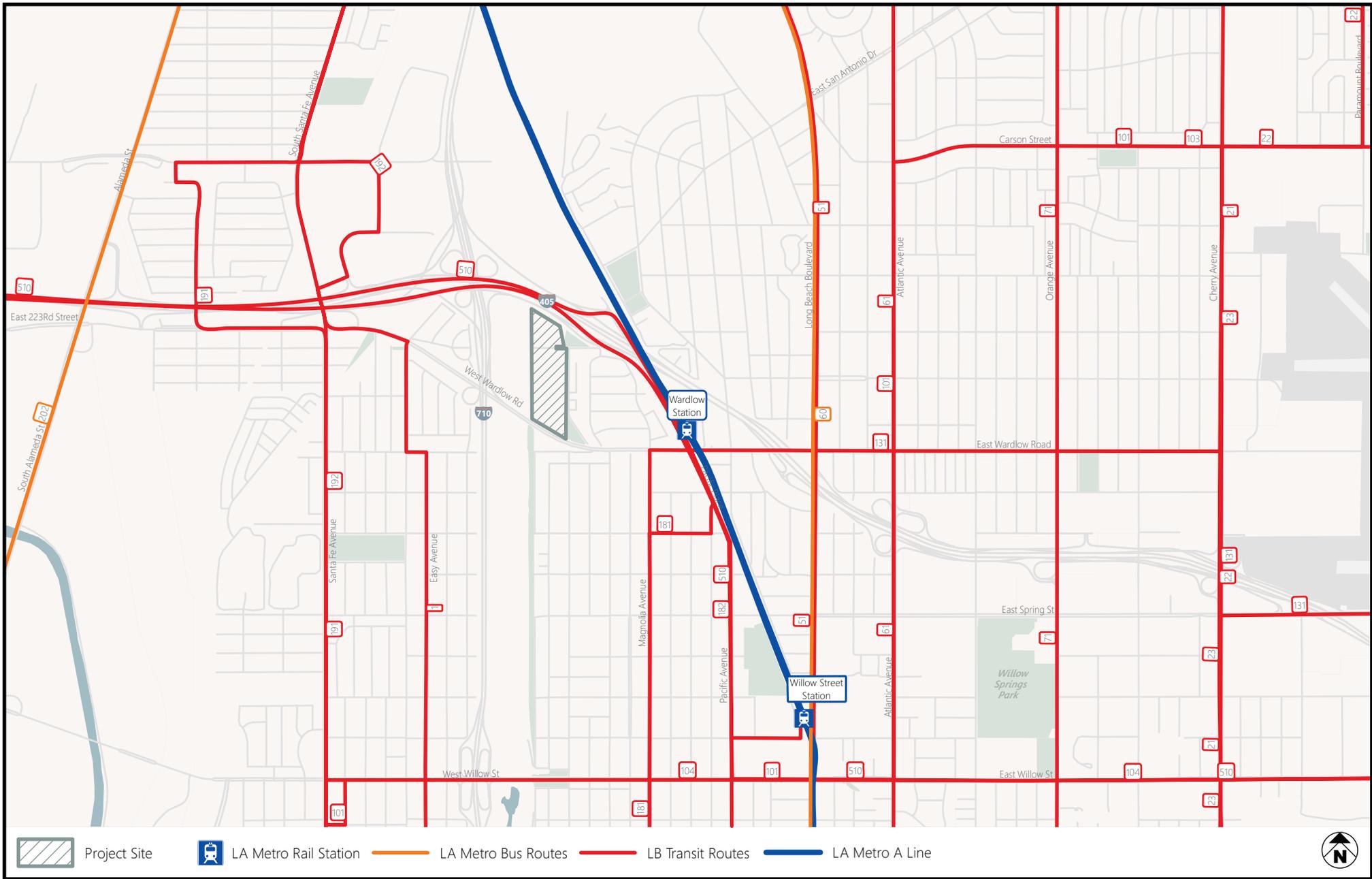
Class IV bicycle facilities, sometimes called cycle tracks or separated bikeways, provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic via separations (e.g. grade separation, flexible posts, inflexible physical barriers, on-street parking). California Assembly Bill 1193 (AB 1193) legalized and established design standards for Class IV bikeways in 2015.



- Project Site
- 1 Santa Fe Ave. and Wardlow Rd.
- 2 Magnolia Ave. and Wardlow Rd.
- 3 Pacific Pl. and Wardlow Rd.
- 4 Long Beach Blvd. and Wardlow Rd.
- 5 Atlantic Ave. and Wardlow Rd.
- 6 Magnolia Ave. and Spring St.
- 7 Pacific Ave. and Spring St.

SOURCE: River Park Traffic Impact Analysis – Fehr & Peers - 2020

FIGURE IV.M-2

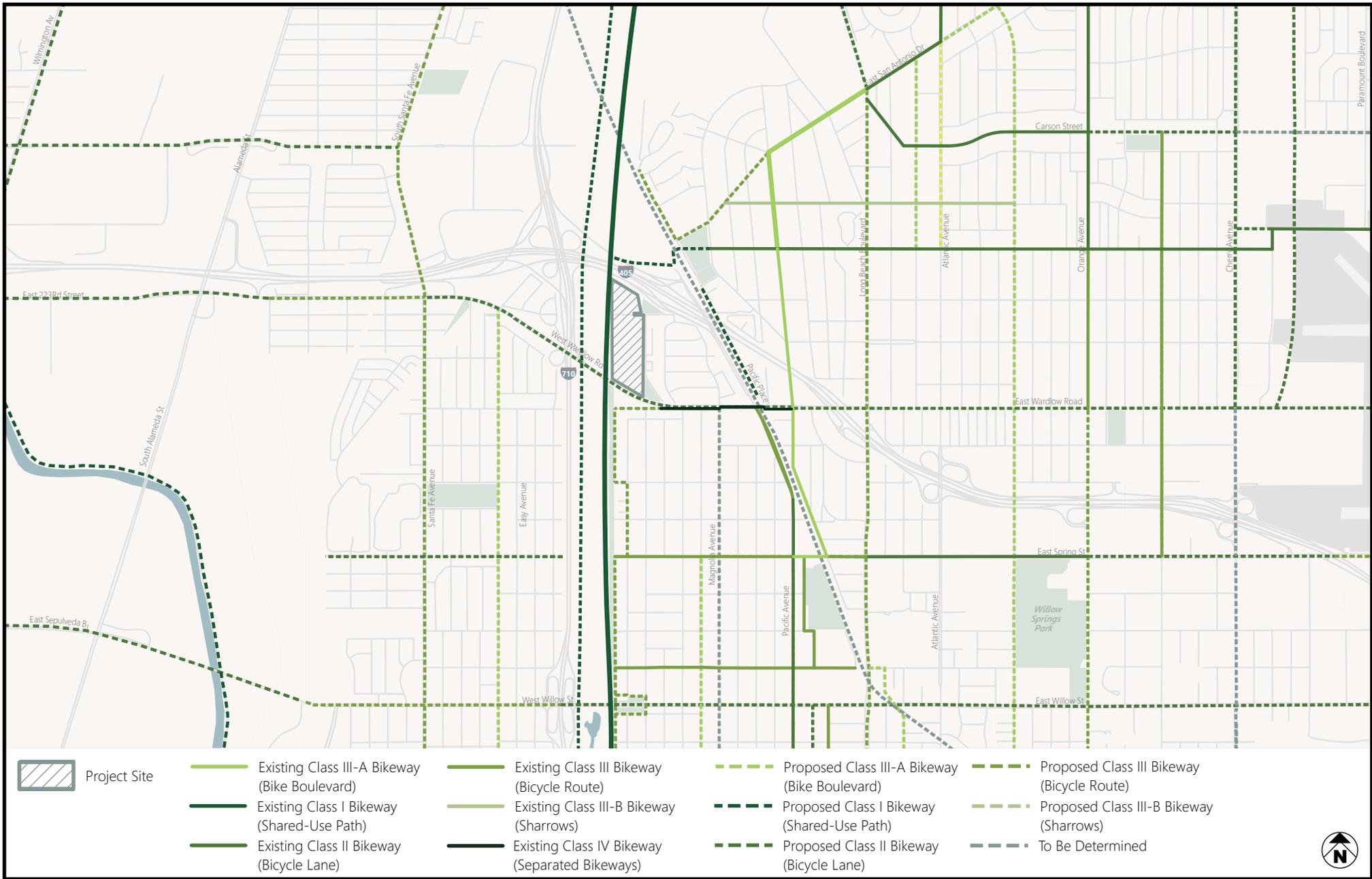


SOURCE: River Park Traffic Impact Analysis – Fehr & Peers - 2020

FIGURE IV.M-3



# Existing Transit Routes



SOURCE: River Park Traffic Impact Analysis – Fehr & Peers - 2020

FIGURE IV.M-4

### ***Bike Share Program***

The City of Long Beach launched the “Long Beach Bike Share Program” in March 2016 as part of its effort to enhance mobility options and bicycle infrastructure. The bike share program includes approximately 472 bikes and 82 stations, with the nearest stations located just over 1-mile east of the Project Site on Bixby Road, Wardlow Road and Atlantic Avenue. Users have the option of renting the bike on an hourly basis for \$7.00 or purchasing either of the following plans—a membership monthly plan for \$15, which includes 90 minutes of daily use time, or an annual plan for \$120, which includes 90 minutes of daily use. Up to six persons can share one membership account. Prospective users can assess availability of bicycles at a station via a mobile phone app. Within the vicinity of the proposed Project, stations are located at the following intersections:

- Bixby Road & Long Beach Boulevard
- Wardlow Road & Pacific Avenue
- Atlantic Avenue & Carson Street

### ***Pedestrian***

The City has goals, policies, and implementation measures designed to create a system of complete streets that support and encourage all mobility users, regardless of age or ability, including pedestrians, bicyclists, and transit riders. Pedestrian facilities in the study area include sidewalks, crosswalks, and pedestrian signals. The major streets that provide access to the proposed Project include Wardlow Road, Magnolia Avenue, and Baker Street. Sidewalks are provided on both sides of these streets, except for portions of Wardlow Road (between Magnolia Avenue and the Project Site). Although, this section does have an adjacent local access road with sidewalk that is separated by a concrete, landscaped median, as well as a sidewalk on the south side of Wardlow Road between Maine Avenue and the Project Site. At the signalized intersections in the area, crosswalks, and pedestrian push-button actuated signals are provided.

The proposed Project is located immediately east of the LA River, which provides an eastern walking path adjacent to the river itself and pedestrian access to local greenspace amenities (for example, the Dominguez Gap Wetlands located approximately one-half mile north of the proposed Project). There are no walking trails on the western side of the LA River, which is parallel to the 710 freeway. The closest existing pedestrian entrance to the LA River (Wrigley Greenbelt) is situated at the northwestern corner of De Forest Avenue and West 34th Street, located south of the proposed Project and Wardlow Road. Pedestrians departing from the Project Site must walk approximately 0.7 miles to reach the Wrigley Greenbelt entrance, crossing at Magnolia Avenue (east of the Project Site and the LA River). Other pedestrian access points within approximately a mile of the Project Site include: the Del Mar Avenue &

North Virginia Avenue entrance (north of the Project Site and the 405 freeway) and the De Forest Avenue and 26th Way entrance (south of the Project Site, immediately north of Willow Street). Within the Project Site, there is an unpaved path along Baker Street that provides direct access to the LA River walking path.

There also currently exists a public dog park on the north side of Wardlow Road, adjacent to the Project Site. The Wrigley Heights dog park, located at 3401 Golden Avenue, is approximately two acres in size and can be accessed via Golden Avenue. Existing mulch makes up the surface material, while the perimeter and division of the Site is identified by painted chain link fencing. The park is separated by Wardlow Road by an enclosed chain link fence. There is no existing sidewalk on the north side of Wardlow Road at this location. The dog park is accessed via the Golden Avenue south parking driveway, which parallels Wardlow Road. Additionally, a second gated pedestrian access point is provided to the north, along Golden Avenue -approximately at the mid-point of the dog park. The existing neighborhood Baker Street park at Baker Street & Golden Avenue is located east of the Project Site, adjacent to the proposed open space portion of the Project.

### ***Multimodal Site Access***

There currently exists Class IV protected bike lane facilities along Wardlow Road, in both directions, east of the Project Site. The bike lane on the south side of Wardlow Road, in the eastbound direction, begins east of the Project's main driveway -east of 34th Street and continues east past Wardlow Road. The bike lane on the north side of Wardlow Road, in the westbound direction, begins east of Pacific Place and ends at Magnolia Avenue. Within the study area, Class II bikeways are planned along Wardlow Road, fronting the Project Site, per the City's Bike Master Plan. Other bike facilities are planned for Magnolia Avenue, but the type of classification is still to be determined.

The major roads within the Project vicinity—Wardlow Road, Magnolia Avenue, and Baker Street—provide sidewalks on either side of the road for pedestrian access. The proposed Project is also located adjacent to the Los Angeles River which provides an eastern walking path adjacent to the river itself and pedestrian access to local greenspace amenities such as the Dominguez Gap Wetlands located approximately one-half mile north of the Project Site. Other pedestrian access points to the Los Angeles River, within approximately a mile of the Project Site include: the Del Mar Avenue & North Virginia Avenue entrance (north of the Project Site and the 405 freeway) and the De Forest Avenue and 26th Way entrance (south of the Project Site, immediately north of Willow Street). Within the Project Site, there is an informal path along Baker Street that provides direct access to the LA River walking path. There are two parks located north and south of the Project Site that include access by roadway.

### **3. REGULATORY SETTING**

#### ***State***

##### **SB 743**

As a result of SB 743, the new recommended metric in the CEQA guidelines for transportation impacts is Vehicle Miles Traveled (VMT) per capita. The legislative intent of SB 743 is to balance the needs of congestion management with Statewide goals for infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions.

##### **Vehicle Miles Traveled (VMT)**

On December 28, 2018, the California Natural Resources Agency adopted revised CEQA Guidelines. Among the changes to the guidelines was the removal of vehicle delay and LOS from consideration for transportation impacts under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on vehicle miles traveled. Lead agencies are allowed to continue using their current impact criteria, or to opt into the revised transportation guidelines. However, the new guidelines must be used starting July 1, 2020, as required in CEQA section 15064.3.

#### ***Local***

##### **Traffic Impact Analysis Guidelines**

The City of Long Beach Department of Public Works requires Applicants to analyze the traffic and circulation impacts of proposed development projects, General Plan Amendments (GPAs), Specific Plans (SPs), and other planned development to comply with the California Environmental Quality Act (CEQA) and City regulations. These requirements shall be satisfied through the preparation of a Traffic Impact Analysis (TIA) document prepared in conformance with the Department of Public Works, Traffic Engineering Division requirements as described in the TIA.

The City of Long Beach Traffic Impact Analysis Guidelines provide direction for review consistent with the General Plan Mobility Element vision that "Plans, maintains, and operates mobility systems consistent with the principles of complete streets, active living, and sustainable community design." The TIA Guidelines identify the suggested format and methodology that is generally required to be utilized in the study preparation, subject to amendment. The purpose of these guidelines is to establish procedures to ensure consistency of analysis and the adequacy of information presented regarding the proposed development project.

## City of Long Beach General Plan – Mobility Element

The City of Long Beach General Plan Mobility Element, updated in 2013, establishes the vision, goals, policies, and implementation measures required to improve and enhance the city's local and regional transportation networks. The Mobility Element describes LOS as the system the City of Long Beach uses to measure the efficiency and performance of traffic operations at a specific location.

## City of Long Beach Municipal Code

### *Construction Traffic*

Chapter 8.80.202 of the Long Beach Municipal Code (LBMC) limits construction activities to occur between the hours of 7:00 A.M. and 7:00 P.M. on weekdays and from 9:00 A.M. to 6:00 P.M. on Saturdays and national holidays. No construction is permitted on Sundays.

## 4. ENVIRONMENTAL IMPACTS

### *Thresholds of Significance*

In order to assess whether a project would have a significant effect on the environment, the Project would be analyzed using vehicle miles traveled (VMT) per capita and would be determined to have a significant impact to traffic and transportation if it would:

- Threshold TRA-1:** Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Threshold TRA-2:** Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).
- Threshold TRA-3:** Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Threshold TRA-4:** Result in inadequate emergency access?

## 5. METHODOLOGY

The methodology and base assumptions used in this analysis were established in consultation with the City of Long Beach and in accordance with the Long Beach TIA Guidelines. The City of Long Beach has developed several screening thresholds for land development projects. The State Office of Planning and Research (OPR) finalized the revisions to the CEQA Guidelines in accordance with Senate Bill (SB) 743, which replaces automobile delay and Level of Service (LOS) with Vehicle Miles Traveled (VMT) as the new metric of analysis. With implementation of the SB 743 guidelines, the LOS analysis requirements would not affect the CEQA transportation impacts analysis and would be fully separate from CEQA except where

deemed necessary to determine whether a proposed project would result in hazards due to geometric design features or inadequate emergency access.<sup>1</sup> The screening criteria, VMT analysis, thresholds and mitigation presented below are in accordance with the City's TIA guidelines adopted in July, 2020.

### ***Vehicle Miles Traveled (VMT)***

OPR finalized the revisions to the CEQA Guidelines in accordance with SB 743, which replaces automobile delay and LOS with VMT as the new metric of analysis. The screening criteria, VMT analysis, thresholds and mitigation are in accordance with the City's TIA guidelines adopted in July, 2020. Both a Project-level and cumulative assessment was performed using the SCAG adopted 2016 RTP/SCS Travel Demand Model. The Project VMT impact analysis includes: (1) Determining the appropriate metric and corresponding threshold of significance, (2) Calculating the Project VMT, (3) Determining the impact significance, and, if applicable, (4) Recommend appropriate mitigation measures.

Based on the proposed residential land use of the Project, the metric of analysis would include the following:

- Residential Uses – VMT per capita calculated as the total home-based productions VMT divided by the population of the proposed Project.

Based on the City's TIA guidance, a project generating 1,000 average daily trips (ADT) or more should use a traffic-forecasting tool, such as the SCAG's 2016 RTP/SCS travel demand model. Such a tool can more appropriately define the select links used and the total VMT generated by the proposed Project. For this study, the SCAG 2016 base year travel demand model was utilized to estimate the residential VMT per capita for the proposed Project.

### ***Level of Service (LOS)***

Pursuant to CEQA, VMT is now the only metric used to identify transportation impacts under CEQA. Analysis of the prior metric of LOS is no longer required under CEQA. However, the City continues to require an analysis of a project's impacts on the operations of roadway facilities, which are described in terms of the volume-to capacity ratios (the volume of traffic compared to the capacity of the roadway to accommodate traffic) and corresponding LOS for each of the study intersections during the weekday AM and PM peak hours in order to confirm acceptable operations of the roadway facilities and identify LOS deficiencies. Accordingly, even though no longer required by CEQA, this EIR includes an analysis of the

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1 City of Long Beach, *Traffic Impact Analysis Guidelines*, <http://www.Mongbeach.gov/globalassets/lbds/media-library/documents/planning/environmental/environmental-planning/tia-guidelines>, accessed April 2021.

proposed Project's impacts on LOS on area roadways for purposes of transportation planning and to ensure that no hazardous conditions are created by the Project, as discussed under threshold TRA-3.

### ***Traffic Impact Analysis Guidelines***

The City of Long Beach Department of Public Works requires Applicants to analyze the traffic and circulation impacts of proposed development projects, GPPAs, SPs, and other planned development to comply with the CEQA and City regulations. These requirements shall be satisfied through the preparation of a TIA document prepared in conformance with the Department of Public Works, Traffic Engineering Division requirements as described in the TIA.

The City of Long Beach Traffic Impact Analysis Guidelines provide direction for review consistent with the General Plan Mobility Element vision that "Plans, maintains, and operates mobility systems consistent with the principles of complete streets, active living, and sustainable community design." The TIA Guidelines identify the suggested format and methodology that is generally required to be utilized in the study preparation, subject to amendment. The purpose of these guidelines is to establish procedures to ensure consistency of analysis and the adequacy of information presented regarding the proposed development project.

### ***Project Trip Generation Forecast***

Trip generation refers to the process of estimating the amount of vehicular traffic a proposed project would add to the local roadway network. For this analysis, trip generation was estimated for typical daily, weekday AM peak and PM peak hours. Trip generation rates from Trip Generation, 10th Edition (Institute of Transportation Engineers, 2017) were used to estimate the number of peak hour trips associated with the Project. With implementation of the SB743 guidelines, the LOS analysis requirements would not affect the CEQA transportation impacts analysis previously presented and would be fully separate from CEQA. The development of peak hour vehicular traffic estimates for the Project involves the use of a three-step process: trip generation, trip distribution, and traffic assignment.

The proposed Project includes the following land uses:

- A total of 226 dwelling units: 53 Carriage Townhouses, 99 Row Townhouses, and 74 Individual Condominium Units. The total Site area is 20.34 acres, which includes 15.53 acres of developed area and 4.81 acres of open space. A total of 514 parking stalls would be provided, including 452 off-street parking (i.e., garage), 59 on-street parking (on private streets within the development) for visitors/guests and 3 van accessible ADA (Americans with Disabilities Act) stalls. Internal circulation would be provided via several newly constructed private streets, along with pedestrian sidewalk infrastructure.

The total number of trips generated by the new development were adjusted to account for transit, given the Project Site's close proximity (0.5-mile) to the LA Metro Wardlow A Line station.

### ***Project Trip Distribution and Assignment***

The geographic distribution of trips generated by the proposed Project is dependent on characteristics of the street system serving the Project Site; the level of accessibility of routes to and from the Project Site; and location of employment areas for which residents of the housing units would be drawn. A select zone analysis was conducted for the proposed uses to inform the general distribution pattern for this study. The road network assignment of Project traffic volumes took into consideration the locations of the proposed Project driveways on Wardlow Road and Baker Street and the north Baker Street gated driveway for occasionally City maintenance vehicles. Additionally, this driveway is designated for emergency vehicle access. The trip distribution and assignment process is used to estimate how the trips generated by a project would be distributed.

### ***Analysis Years and Scenarios***

Pursuant to California Public Resources Code Section 21099(b)(2) and CEQA Guidelines Section 15064.3, "a project's effect on automobile delay shall not constitute a significant environmental impact." Nevertheless, this analysis provides a discussion of the proposed Project's effects on background, proposed Project and cumulative LOS conditions for informational purposes, because they are relevant to consistency with City standards for the performance of the circulation system.

**Table IV.M-1: Intersection Level of Service Thresholds** represents the intersection level of service thresholds, as defined in the Highway Capacity Manual, 6<sup>th</sup> Edition, for both signalized and unsignalized intersections.

### **Baseline (2020) Conditions**

Per the City's TIA guidelines, the most recent available traffic conditions and physical geometry were used to determine existing conditions. Given the COVID-19 pandemic, and stay-at-home orders from the County, historical traffic counts were retrieved for several of the study intersections in coordination with the City.

**Table IV.M-1  
Intersection Level of Service Thresholds**

#	Signalized Intersection Average Control Delay (sec/veh)	Unsignalized Intersection Average Control Delay (sec/veh)
A	≤ 10.0	≤ 10.0
B	> 10.1 to 20.0	> 10.0 to 15.0
C	> 20.1 to 35.0	> 15.0 to 25.0
D	> 35.1 to 55.0	> 25.0 to 35.0
E	> 55.1 to 80.0	> 35.0 to 50.0
F	> 80.0	> 50.0

Source: Highway Capacity Manual, 6<sup>th</sup> Edition. Transportation Research Board, 2016.

Turning movement intersection counts for the AM and PM peak periods were collected at the 7 study intersections as follows:

- Intersection #1 – Santa Fe Avenue & Wardlow Road on May 23, 2018
- Intersection #2 – Magnolia Avenue & Wardlow Road on September 23, 2020
- Intersection #3 – Pacific Place & Wardlow Road on September 23, 2020
- Intersection #4 – Long Beach Boulevard & Wardlow Road on May 10, 2018
- Intersection #5 – Atlantic Avenue & Wardlow Road on September 23, 2020
- Intersections #6 – Magnolia Avenue & Spring Street on September 23, 2020
- Intersections #7 – Pacific Avenue & Spring Street on September 23, 2020

While the counts conducted in September of 2020 are not representative of typical weekday peak period traffic conditions, they provided a reasonable picture of the relative distribution of turning movement volumes at these locations. The 2020 counts were also adjusted accordingly by balancing the through movement volumes along Wardlow Road to match the observed through movements in 2018 (pre-COVID) at Long Beach Boulevard. A 0.4 percent annual growth rate factor was also applied to the 2018 counts at intersections #1 and #4 to reflect a 2020 existing baseline condition.

As part of the field inventory of the study area, Fehr & Peers also collected the following information:

- Lane configurations and signal phasing
- Adjacent land uses, as well existing pedestrian and bicycle facilities, including transit service

### **Baseline Traffic Level of Service**

Traffic volumes, existing lane configurations, and signal timings were used to evaluate operations at the study intersections for Baseline AM and PM peak hour conditions. The results are summarized in **Table IV.M-2**, showing LOS and average delay per vehicle at the study intersections. All intersections operate at LOS D or better, except for Santa Fe Avenue & Wardlow Road in the PM peak hour (intersection #1), Long Beach Boulevard & Wardlow Road in the PM peak hour (intersection #4), and Atlantic Avenue & Wardlow Road in the PM peak hour (intersection #5).

According to **Table IV.M-2: Existing Baseline Conditions Intersection Levels of Service** of the City's Mobility Element 2035, Santa Fe Avenue & Wardlow Road (intersection #1) operates with LOS E during the PM peak hour. Moreover, the intersections specified in the City of Long Beach General Plan Mobility Element already operating at LOS E/F would be allowed to operate at existing levels.

### **Opening Year (2026) Conditions**

To evaluate the potential effects of the proposed Project's geometric design features and emergency access on opening year (2026) conditions, it was necessary to develop estimates of future traffic conditions in the area both without and with Project traffic. First, estimates of traffic growth were developed for the study area to forecast future conditions without the proposed Project. These forecasts included traffic increases as a result of both regional ambient traffic growth and traffic generated by specific developments in the vicinity of the proposed Project (related projects).

These projected traffic volumes, identified herein as the Opening Year No Project conditions, represent the future baseline conditions without the proposed Project. The traffic generated by the proposed Project was then estimated and assigned to the surrounding street system. Project traffic was added to the Opening Year No Project conditions to form Opening Year Plus Project traffic conditions, which were analyzed to determine the incremental traffic effects attributable to the proposed Project itself. The assumptions and analysis methodology used to develop each of the future year scenarios discussed above are described in more detail in the following sections.

**Table IV.M-2  
Existing Baseline Conditions Intersection Levels of Service**

#	Study Intersection	AM Peak Hour		PM Peak Hour	
		Delay <sup>2</sup>	LOS	Delay	LOS
1	Santa Fe Avenue & Wardlow Road	31.8	C	76.6	<b>E</b>
2	Magnolia Avenue & Wardlow Road	13.6	B	16.4	B
3	Pacific Place & Wardlow Road	18.6	B	35.3	D
4	Long Beach Boulevard & Wardlow Road	52.7	D	57.7	<b>E</b>
5	Atlantic Avenue & Wardlow Road	32.6	C	>120	<b>F</b>
6	Magnolia Avenue & Spring Street	15.5	B	19.0	B
7	Pacific Avenue & Spring Street	12.2	B	17.0	B

Notes: Intersection operations below LOS D are shown in **bold**.

Source: Fehr & Peers, River Park TIA, (March 2021). Refer to **Appendix IV.M-1**

### **Background and Ambient Growth**

Based on the direction of City's TIA guidelines, an ambient growth factor of 0.4 percent per year was applied to adjust the baseline year traffic volumes to reflect the effects of regional growth and development. This adjustment was applied to the baseline year (2020) traffic volume data to reflect the effect of ambient growth by the opening year 2026. Note, a 0.4 percent growth factor was also applied to the two study locations where 2018 historical counts were retrieved to adjust them to the baseline year (2020).

### **Related Project Traffic Generation and Assignment**

Opening Year traffic forecasts include the effects of known specific projects, called related projects, expected to be implemented in the vicinity of the Project Site prior to the buildout date of the proposed Project. The list of related projects was prepared based on data from the City.

- Self-Storage/RV Storage Facility at 3701 Pacific Place.
- Laserfiche Office Building at 3435 Long Beach Boulevard

### **Trip Distribution**

The geographic distribution of the traffic generated by the related projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of

2 Delay (second per vehicle) and LOS estimated using HCM 6th Edition.

population from which employees and potential patrons of proposed commercial developments may be drawn, the locations of employment and commercial centers to which residents of residential projects may be drawn, and the location of the projects in relation to the surrounding street system. Additionally, if the traffic study or environmental document for a related project was available, the trip distribution from that study was used.

### ***Traffic Assignment***

Using the estimated trip generation and trip distribution patterns described above, traffic generated by the related projects was assigned to the street network.

### ***Opening Year No Project Traffic Volumes***

The Opening Year No Project traffic conditions represent an estimate of future conditions without the proposed Project inclusive of the ambient background growth and related projects traffic.

### ***Opening Year Operational Analysis***

The 2026 Opening Year No Project and Plus Project peak hour traffic volumes were analyzed to determine the projected LOS and queue lengths for the turn pockets for each of the analyzed intersections. The Project traffic volumes were added to the Opening Year No Project traffic projections, resulting in Opening Year (2026) Plus Project AM and PM peak hour traffic volumes. The Opening Year (2026) Plus Project scenario presents future traffic conditions with the completion of the proposed Project. Per the City's TIA guidelines for project traffic analysis, the City has identified LOS D as the threshold for acceptable operating conditions for intersections. The following criteria was used to determine if the addition of Project traffic would be responsible for LOS deficiencies and whether feasible roadway modifications should be identified to improve performance:

- A signalized intersection to degrade from LOS D or better under baseline conditions to LOS E or LOS F with the addition of project trips in the opening year. On occasion, LOS E may be allowed for peak periods in very dense urban conditions (according to City guidelines) per the City's discretion. The intersections specified in the City of Long Beach General Plan Mobility Element already operating at LOS E/F would be allowed to operate at existing levels, including intersection #1 -Santa Fe Avenue & Wardlow Road.
- The average delay to increase by 2.5 seconds or more at a signalized intersection operating at LOS E or LOS F under baseline conditions.
- Under project conditions, the 95th percentile queue length exceeds the available storage length at any turn bay.

### **Opening Year (2026) No Project Traffic Level of Service**

Four of the seven study intersections are projected to operate at LOS D or better during the morning and afternoon peak hours under Opening Year (2026) No Project conditions. The following signalized intersections are projected to operate at LOS E or F under Opening Year (2026) No Project conditions:

1. Santa Fe Avenue & Wardlow Road – PM peak hour only
4. Long Beach Boulevard & Wardlow Road – AM and PM peak hours
5. Atlantic Avenue & Wardlow Road – PM peak hour only

### **Opening Year (2026) Plus Project Traffic Analysis**

Four of the seven study intersections are projected to operate at LOS D or better during the morning and afternoon peak hours under Opening Year (2026) Plus Project conditions. The following signalized intersections are projected to operate at LOS E or F under Opening Year (2026) Plus Project conditions:

1. Santa Fe Avenue & Wardlow Road – PM peak hour only
4. Long Beach Boulevard & Wardlow Road – AM and PM peak hours
5. Atlantic Avenue & Wardlow Road – PM peak hour only

Per the City's intersection performance criteria and LOS thresholds, the addition of Project traffic would be responsible for LOS deficiencies if a signalized intersection would degrade from LOS D or better under baseline conditions to LOS E or LOS F with the addition of Project trips in the opening year. As shown above, none of the study intersections are projected to degrade from LOS D or better with the addition of Project trips. Furthermore, at locations already operating with LOS E or LOS F under opening year baseline conditions, the average delay increases by less than 2.5 seconds with the addition of Project trips. Additionally, none of the study locations are projected to experience a deficient queuing movement at the turn bays with the addition of Project traffic in the opening year per the City's performance criteria. Therefore, the addition of Project traffic would not be responsible for LOS deficiencies with respect to average delay the intersections, or queuing at the turn bays and thus no hazard or safety impacts would occur.

**Table IV.M-3  
Opening Year (2026) With and Without Project Intersection Levels of Service**

Intersection No.	Study Intersection	Future Base (2026)				Future Base (2026) Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Santa Fe Avenue & Wardlow Road	30.7	C	81.0	F	32.1	C	81.5	F
2	Magnolia Avenue & Wardlow Road	13.7	B	17.5	B	13.8	B	18.1	B
3	Pacific Place & Wardlow Road	19.0	B	39.5	D	18.9	B	40.2	D
4	Long Beach Boulevard & Wardlow Road	55.9	E	63.6	E	56.5	E	65.0	E
5	Atlantic Avenue & Wardlow Road	32.9	C	137.7	F	33.1	C	137.9	F
6	Magnolia Avenue & Spring Street	15.6	B	19.0	B	15.6	B	19.1	B
7	Pacific Avenue & Spring Street	12.3	B	17.4	B	12.3	B	17.5	B

## 6. PROJECT IMPACTS

**Threshold TRA-1:** Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

Under CEQA, a project is considered consistent with an applicable plan if it is consistent with the overall intent of the plan and would not preclude the attainment of its primary goals. A project does not need to be in perfect conformity with each and every policy. Finally, any inconsistency with an applicable plan, ordinance or policy is only a significant impact under CEQA if the plan, ordinance, or policy was adopted for the purpose of avoiding or mitigating an environmental effect and if the inconsistency itself would result in a direct physical impact on the environment.

The City of Long Beach Mobility Element guides the operations and design of streets and other public right of way. It lays out a vision for improving the way people, goods, and resources move from place to place. The Mobility Element addresses all modes of travel, and in addition to improving mobility and accessibility to opportunities, the plan is about enhancing the quality of life for today's generation, as well as generations to come. Strategies within the Mobility Element and the corresponding consistency analysis is included below:

### Mobility Element

**Strategy No. 1:** Establish a network of complete streets that complements the related street type.

The Project includes internal sidewalk infrastructure for pedestrians, along with connectivity to Wardlow Road and Golden Avenue. Additionally, on-Site bicycle parking would be provided to encourage active transportation. The Project does not conflict with or prevent the City from pursuing this program.

**Strategy No. 2:** Establish a network of complete streets that complements the related street type.

The Project does not conflict with or prevent the City from pursuing this program.

**Strategy No. 3:** Strategically improve congested intersections and corridors.

The Project does not conflict with or prevent the City from pursuing this program.

**Strategy No. 5:** Reduce the environmental impacts of the transportation system.

The Project does not result in a VMT impact, which is the CEQA metric aligned with achieving the State's goal of reducing GHG emissions. The Project does not conflict with or prevent the City from pursuing this program.

**Strategy No. 6:** Manage the supply of parking.

The Project includes on-street parking, with the majority of supply dedicated to off-street (garage) parking. The Project does not conflict with or prevent the City from pursuing this program.

Additionally, the City's Mobility Element describes several projects that would exist within the vicinity of the Project and be consistent with the implementation of the Project:

- **The Metro A Line (formerly Blue Line) Wardlow Station Park and Ride capital project.** This project would develop increased vehicle capacity at the station to encourage ridesharing, transit use, and multimodal connectivity.
- **Signal improvements along Magnolia Avenue.** This project includes video detection, signal coordination, and wireless communications; from Wardlow Road to Ocean Boulevard.
- **Long Beach Boulevard/Wardlow Road and the I-405 ramp reconfiguration.** This project includes ramp reconfiguration to improve connections to Long Beach Boulevard and reduce congestion at Pacific Place & Wardlow Road.
- **Wardlow Road Corridor Improvements.** Design and implement corridor improvements on Wardlow Road between Long Beach Boulevard and Cherry Avenue, including freeway ramp access configuration, sidewalk improvements, and signal system upgrades.
- **Santa Fe Avenue Streetscape Enhancements.** Design and implement streetscape enhancements on Santa Fe Avenue from Pacific Coast Highway to Wardlow Road.

Overall, the proposed Project was reviewed and compared to existing and future conditions resulting from implementation of the Project, including access, high injury corridor identification, and pedestrian, bicycle and transit accessibility. The proposed Project features are intended to minimize impacts to the public right-of-way and enhance the user experience by integrating multimodal transportation options which aligns with the Strategies of the Mobility Element, including on-site pedestrian infrastructure and trails to the 4.81 acres of dedicated open space north of the developed Site area.

Additionally, the Housing Element includes policies and programs related to multimodal transportation, public facilities, and roadway infrastructure. The goal of the Housing Element is to provide a clean, safe, healthy and prosperous City where residents, business and government are partners in balancing growth, the environment, cultural and neighborhood interests; and creating places for people of all lifestyles, cultures and perspectives to flourish, live, love, learn and contribute. Policies and programs within the Housing Element and the corresponding consistency analysis is included below:

### **Housing Element**

**Policy 3.5:** Continue to improve streets and drainage, sidewalks and alleys, green spaces and park, street trees, and other public facilities, amenities and infrastructure.

The Project would include new drainage, sidewalks, public green space, and street trees an area that is not currently in use and make it available to new residents and existing residents of the City, making the Project consistent with this policy.

**Policy 4.5:** Encourage residential development along transit corridors, in the downtown and close to employment, transportation and activity centers; and encourage infill and mixed-use developments in designated districts.

The Project would be consistent with this policy since it is less than a mile away from an existing transit corridor and is considered an in-fill Project.

**Program 2.5 Universal Design:** Universal Design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. The City promotes these principles by enforcing the American's With Disabilities Act (ADA), providing a visibility ordinance for City-assisted new construction of single family homes and duplexes, and sponsoring a City Disability Commission.

The Project would be consistent with this program through the inclusion of ADA parking on-site and the implementation of paved walkways throughout the public Open Space allowing any and all people to participate in the public amenities available within the Project Site.

Overall, the proposed Project's transportation elements would be generally consistent with the policies and programs outlined within the Housing Element by providing improved streets, sidewalks, in close proximity to existing transit, and provide ADA access for the disabled population.

Further, the proposed Project would incorporate LEED requirements into the Project design, which include specifications for bicycle facilities.<sup>3</sup> The requirements include functional entry or bicycle storage within a 200-yard walking distance or bicycling distance from a bicycle network that connects to either at least 10 diverse uses; a school or employment center if the Project total floor area is 50 percent or more residential; or a bus rapid transit stop, passenger rail station, or ferry terminal. Short-term bicycle storage is required for at least 2.5 percent of all peak visitors and long-term storage for at least 15 percent of all regular building occupants.

The proposed Project would also encourage bicycle use to and from the Project Site by providing bicycle parking in accordance with the City requirements and in proximity to existing bicycle facilities along Wardlow Road, as well as future planned bicycle facilities within the vicinity of the proposed Project, including along Magnolia Avenue south of Wardlow Road. The proposed Project would encourage pedestrian activity because it concentrates the development near public transit, which provides residences and visitors access to the Site that can be conveniently accessed by walking, biking, or taking transit. The proposed Project would also accommodate pedestrian activity with its access locations and open space, which would be designed to City standards to provide adequate sight distance and pedestrian movement controls that would meet the City's requirements to protect pedestrian safety.

The Safe Streets Long Beach Plan is a plan that strives to eliminate traffic-related fatalities and serious injuries in Long Beach by 2026 through multiple strategies, such as modifying streets to better serve vulnerable road users. The plan uses data analysis, community input, and best practice research to identify programs and policies that can make the streets safer for everyone. The Project meets the goals and objectives set forth in the Vision Zero plan. The pedestrian points of access would be provided along Wardlow Road and Baker Street, and bicycle parking would be provided on-site. The Project is located in the vicinity of the Los Cerritos safe route to school map area. Projects located on the High Injury Corridor (HIC) should make improvements or fund them. The proposed Project is not located on a High Injury

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3 U.S. Green Building Council, LEED v4.1 Residential Building Design and Construction, <https://www.usgbc.org/leed/v41>, accessed April 2021.

Corridor, as identified in the plan. No specific Vision Zero projects are planned for Wardlow Road next to the proposed Project, and the proposed Project would not conflict with the implementation of future Vision Zero projects in the public right-of-way.

The proposed Project features, location, and design generally support multimodal transportation options and would be consistent with policies, plans, and programs that support alternative transportation, including the Mobility Element 2035, the Housing Element and the Safe Streets Action Plan. The proposed Project design and features would not substantially increase hazards, conflicts, or preclude City action to fulfill or implement projects associated with these networks and would contribute to overall walkability through enhancements to the Project Site and streetscape. Consistency impacts relating to existing policies, plans, and programs would be less than significant.

**Threshold TRA-2: Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?**

According to CEQA Guidelines Section 15064.3,

*(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.*

Transit priority areas (TPAs) in Long Beach are identified based on the California PRC definitions for major transit stops<sup>4</sup> or high-quality transit corridors.<sup>5</sup> The *OPR Technical Advisory on Evaluating Transportation Impacts in CEQA* identifies the following four criteria for which the presumption would not apply. Any project located in a TPA would be presumed to have a less than significant transportation impact related to CEQA Guidelines Section 15064.3, subdivision (b), unless the project:

- Has an overall Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required (if parking minimums pertain to the Site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the Site );

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4 A “major transit stop” is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (CA Public Resources Code, Section 21064.3).

5 “High-quality transit corridor” (HQTC) means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours (CA Public Resources Code, Section 21155).

- Is inconsistent with the Long Beach Land Use Element or the SCAG RTP/SCS; or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

The Project Site is located within 0.5-mile of a major transit stop at Wardlow Road & Pacific Place; the LA Metro Blue Line (or “A” Line) Wardlow station. The Project VMT impact would therefore be presumed to be less than significant, and no further analysis would be required according to the City’s TIA guidelines. However, given the secondary conditions listed above, the proposed Project includes more parking for use by residents and visitors than required (by 5 parking spaces). As a result, the proposed Project cannot be presumed to have a less than significant impact due to the Project Site’s proximity to a major transit station and additional analysis was completed.

The Project VMT impact analysis includes: (1) Determining the appropriate metric and corresponding threshold of significance, (2) Calculating Project VMT, (3) Determining the impact significance, and, if applicable, (4) Recommend appropriate mitigation measures. For the purposes of SB 743, VMT to be analyzed is generated by on-road passenger vehicles, specifically cars and light-duty trucks. Based on the proposed residential land use of the proposed Project, the metric of analysis would include VMT per capita calculated as the total home-based productions VMT divided by the population of the proposed Project.

The City’s VMT threshold of significance for the residential uses is 15 percent below the existing regional average VMT per capita, or 11.8 VMT per capita. The region for Long Beach is Los Angeles County. As calculated from the 2016 SCAG RTP/SCS travel demand model, the average daily VMT per capita in Los Angeles County is 13.9 VMT.

Based on the City’s TIA guidance, a project generating 1,000 average daily trips (ADT) or more should use a traffic-forecasting tool. For this study, the SCAG 2016 RTP/SCS travel demand model was utilized as the most recently available to estimate the residential VMT per capita. The Project VMT was determined based on the SCAG 2016 RTP/SCS travel demand model resulting in 10.2 residential VMT per capita. Since the proposed Project VMT metric of 10.2 is less than the significance threshold of 11.8 residential VMT per capita, the proposed Project is presumed to create a less than significant VMT impact and no further VMT analysis is required.

In addition to this analysis, the proposed Project is in close proximity to the Wardlow Metro light-rail station and the traffic analysis zone is a borderline low-VMT area based on the City’s VMT mapping. These factors contribute to the proposed Project’s overall transportation use and would help reduce VMT by the residents of the development. The Project design would also include contiguous routes to support multimodal transportation throughout the community and surrounding neighborhoods. Based on the

information provided, the proposed Project is consistent with CEQA Guidelines Section 15064.3, subdivision (b) and impacts would be less than significant.

**Threshold TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

Pedestrian access to the Project Site would be provided via sidewalks around the perimeter of the Project Site. Residents and visitors arriving to the Project Site by bicycle would have the same access opportunities as pedestrians and would be able to utilize on-site bicycle parking facilities as discussed in an earlier threshold. The proposed Project's access locations would be designed to the City standards and would provide adequate sight distance, sidewalks, crosswalks, and pedestrian movement controls that meet the City's requirements to protect pedestrian safety. Street trees and other potential impediments to adequate driver and pedestrian visibility would be minimal. Pedestrian entrances separated from vehicular driveways would provide access from the adjacent streets.

While there are two driveways proposed as part of the proposed Project, one would be placed on Baker Street, a nonarterial road. The main access driveway would be located on Wardlow Road, with right-in/right-out and left-in/left-out turn movements allowed. The driveways would be designed to comply with City standards, including required signalization by the Department of Public Works. The driveways would not require the removal or relocation of existing passenger transit stops and would be designed and configured to avoid or minimize potential conflicts with transit services, pedestrians, and bicyclists. The proposed Project is not located on a HIC. There currently exists protected, Class IV bike lanes along Wardlow Road, in both directions, east of the Project Site. The bike lane on the north block of Wardlow Road (in the westbound direction) ends at Magnolia Avenue, approximately one quarter mile from the proposed main access driveway. Vehicles entering/exiting the Site would be concentrated along the Wardlow Road main Project driveway, and the Baker Street secondary driveway would be limited to City maintenance vehicles and emergency vehicle access.

The proposed Project was also evaluated to determine if the proposed Project would have a significant impact on the I-710 and I-405 north and south off-ramps. Given the proposed Project access is confined to the Wardlow Road driveway and designed for left-in and right-in/right-out movements, the I-710 northbound on-ramp were analyzed for potential freeway impacts. The proposed Project is projected to result in a less than 1 percent increase in trips based on the freeway mainline capacity in both the AM and PM peak hours on the I-710 northbound on-ramp. Therefore, this location will have a less than significant impact on hazard and safety issues. . In addition, impacts to the I-405 northbound off-ramp to Long Beach Boulevard will result in a less than significant hazard and safety impact given that it is projected to result

in a less than 1 percent increase in trips based on the capacity of the freeway off-ramp (based on an assumed ramp capacity of 850 vehicles per hour per lane).

Both the I-710 southbound off-ramp to eastbound Wardlow Road and the I-405 southbound off-ramp to southbound Pacific Place are projected to result in a 1 percent increase or more in trips based on the capacity of the respective freeway off-ramp. However, the I-405 southbound off-ramp to southbound Pacific Place includes an uncontrolled, two-lane off-ramp from the southbound I-405 to southbound Pacific Place, which screens it from further freeway impact analysis per the City's LOS/delay criteria. The I-710 southbound off-ramp to eastbound Wardlow Road includes an existing yield control, which results in a projected LOS of A in the PM peak hour for the southbound off-ramp. Given the City's criteria for LOS/delay on the off-ramp, this location was also screened from further freeway impact analysis. As such, the Project would not have a significant impact on the freeway ramps.

In addition to freeway traffic analysis, potential effects on bicycle and pedestrian circulation was also assessed. Wardlow Road contains Class IV protected bike lane facilities, in both directions, east of the Project Site. The bike lane on the south side of Wardlow Road, in the eastbound direction, begins east of the proposed Project's main driveway -east of 34th Street and continues east past Wardlow Road. The bike lane on the north side of Wardlow Road, in the westbound direction, begins east of Pacific Place and ends at Magnolia Avenue. There also exists a City Bike Share program, with the nearest stations located just over 1-mile east of the Project Site on Bixby Road, Wardlow Road and Atlantic Avenue.

The proposed Project is not expected to negatively affect or degrade bicycle modes or facilities within the study area, including the existing bicycle lane facilities on Wardlow Road east of the Project Site. The proposed Project related traffic is not expected to add substantial automobile delay to the nearby intersections in the AM and PM peak hours. Additionally, the limited access design of the main proposed driveway on Wardlow Road, with left-out turns prohibited, would minimize the amount of project related eastbound traffic through the Magnolia Avenue and Pacific Place intersections along Wardlow Road.

Pedestrian facilities in the study area include sidewalks, crosswalks, and pedestrian signals. The major streets that provide access to the proposed Project include Wardlow Road, Magnolia Avenue, and Baker Street. These roadways have well-connected and maintained sidewalk networks near the Project Site. Sidewalks are provided on both sides of these streets, except for portions of Wardlow Road (between Magnolia Avenue and the Project Site). Although, this section does have an adjacent local access road with sidewalk that is separated by a concrete, landscaped median, as well as a sidewalk on the south side of Wardlow Road between Maine Avenue and the Project Site. There is also an existing Wrigley Heights dog park adjacent to the proposed Project, immediately to the east on Golden Avenue, with two pedestrian

points of access along Golden Avenue. The existing neighborhood Baker Street park at Baker Street & Golden Avenue is located east of the proposed Project, adjacent to the proposed open space area.

The proposed Project is not expected to negatively affect or degrade pedestrian modes or facilities within the study area. The Applicant would be required to construct a new 12-foot-wide walkway (consisting of a 6-foot-wide concrete sidewalk, curb and curb gutter and 6-foot wide irrigated and planted parkway) sidewalk along the portion of the north side of Wardlow Road where no sidewalk pavement currently exists. The limited access design of the main Project driveway on Wardlow Road, with left-out turns prohibited, would minimize potential conflicts.

However, line-of-sight analysis of vehicle movements at the proposed access driveway on Wardlow Road determined that vehicles at the proposed driveway would lack adequate sight distance along Wardlow Road. This could substantially increase hazards. As such, the Project could have a significant impact and therefore mitigation has been identified below.

**Threshold TRA-4: Result in inadequate emergency access?**

The proposed Project is situated east of the LA River and south of the I405 Freeway, immediately adjacent to residential land uses to the south and east. Emergency vehicles can access the Project Site at the two proposed driveways.

Wardlow Road is a major arterial immediately south of the proposed Project, with no on-street parking. The proposed Project driveway is situated at the southeastern corner of the Project Site and provides right-turn in and left-turn in access from Wardlow Road. The driveway entrance contains two travel lanes for inbound vehicles, with vehicular entry gates, along with one travel lane for outbound vehicles. At its narrowest point, the driveway is 20 feet wide for both lanes, which conforms to City standards.

Baker Street is a residential street spanning across the northern portion of the Project Site and is currently used intermittently by City maintenance vehicles. The Baker Street driveway is situated at the northeastern corner of the Project Site and is accessible via Golden Avenue or Baker Street. The driveway entrance contains one travel lane for each approach and has vehicular entry gates. At its narrowest point, the driveway lane is 14 feet wide, which conforms to City standards. This driveway would be gated, and only accessible by City maintenance vehicles, as well as emergency vehicles.

Within the Project Site, the narrowest streets are 26 feet wide, accounting for building overhangs. Not accounting for overhangs, these streets are 30 feet wide, which conform to City standards. There are 59 designated on-street parking stalls provided for guests, while the remainder of parking is off-street, thus limiting potential conflicts with emergency vehicles on streets.

The proposed Project is close to several emergency service providers, as measured from the proposed Wardlow Road Driveway. The nearest fire station (Long Beach Fire Department Station 9) is located approximately 2.6 miles northeast of the Project Site on Long Beach Boulevard. The nearest police station (Long Beach Police Department – North Patrol) is located approximately 1.85 miles northeast of the Project Site on Atlantic Avenue. Long Beach Memorial Medical Center is the closest hospital, which is approximately 2.7 miles southeast of the Project Site.

The proposed Project is well-served by nearby emergency service providers and grants adequate emergency vehicle access to, from, and within the Project Site. As such, the proposed Project would provide adequate means of emergency access to the Project Site. Impacts related to emergency access would be considered less than significant.

## **7. CUMULATIVE IMPACTS**

On December 28, 2018, the California Natural Resources Agency adopted revised CEQA Guidelines. Among the changes to the guidelines was the removal of vehicle delay and LOS from consideration for transportation impacts under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on vehicle miles traveled.

In coordination with the City two proposed development projects were identified for inclusion in the opening year analysis. A four-story, mixed-use office building is planned for 3435 Long Beach Boulevard, east of the Project Site. The related project is approximately 35,000 square feet and is expected to generate 341 average daily trips, based on ITE's Trip Generation 10th Edition. Additionally, the proposed self-storage and RV storage facility at 3701 Pacific Place. This related project would construct a 150,000-gross-squarefoot building with 1,100 self-storage units and 580 RV storage spaces on the currently vacant property. Based on the analysis included in the trip generation memorandum it was estimated that the self-storage and RV storage facility project would generate fewer than 50 trips per peak hour; approximately 16 trips in the AM peak hour and 31 trips in the PM peak hour. There are no transportation system infrastructure changes in the study area planned for implementation by year 2025 per confirmation by City staff. Therefore, network changes were not included in the analysis.

Based on the minimal increase of forecasted trips from the self-storage and RV storage facility projects and the less than significant VMT impact of the proposed Project, cumulative impact of the proposed Project based on VMT would be less than significant. Additionally, none of the study locations are projected to experience a deficient queuing movement at the turn bays with the addition of the proposed Project traffic in the opening year per the City's performance criteria. Therefore, the addition of Project traffic would not be responsible for queuing at the turn bays. Cumulative transportation impacts within the City would be considered less than significant.

## 8. MITIGATION MEASURES

The proposed Project could have a significant impact due to an increase in hazard due to a geometric design feature. Therefore, the following mitigation measure shall be incorporated into the Project:

### **MM Trans-1** Traffic Control

The Subdivider shall install traffic signal related equipment to current CA MUTCD and/or City of Long Beach Standards, at the intersection of Wardlow Road and the proposed entry to the project, generally in conformance with the “Conceptual Traffic Signal Design” prepared by Subdivider, dated August 25, 2020. Installation of the traffic signal related equipment may include, but not be limited to the following:

- i. Traffic Signal indicators to the most current City standard.
- ii. Vehicular detection shall be installed on all approaches to the signalized intersection. This may include presence, mid or advance detection per City direction. Options will include standard Type E loops or video detection.
- iii. All pedestrian push buttons and indicators shall be to the most current City Standards.
- iv. The Subdivider shall install Emergency Vehicle Pre-Emption (EVPE) equipment. The equipment and installation must be completed per the most current City Standard.
- v. The Subdivider shall install a GPS Module at the traffic signal. The GPS Modules create accurate time-based communications between nearby traffic signals.
- vi. The Subdivider shall install a new traffic signal controller based on the most current City Standard [McCain 2070 Controllers].
- vii. Subdivider shall install 96 count fiber interconnect cable to the satisfaction of the City’s Traffic Engineer, but at a minimum from the proposed traffic signal to Magnolia Avenue.
- viii. Subdivider shall install flashing beacons, on overhead mast arms attached to utility poles, on both approaches to the proposed traffic signal, 450 feet from the stop limit line.

## 9. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With the implementation of the mitigation identified above, the proposed Project would have a less than significant impact on transportation.

## IV.N TRIBAL CULTURAL RESOURCES

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### 1. INTRODUCTION

This section of the Draft EIR discusses existing tribal cultural resources and applicable laws and regulations and provides analysis of the potential effects to Tribal Cultural Resources from the proposed Project. This incorporates information from the following materials: Letters of Formal Tribal Notification of the Project dated January 28, 2020 (**Appendix IV.N.1: Letters of Formal Tribal Notification**), Response to AB52 Consultation Letter prepared by Mr. Andrew Salas, Chairman of the Gabrieleno Band of Mission Indians—Kizh Nation, dated February 3, 2020 (**Appendix IV.N.2: Response to AB52 Consultation Letter – Kizh Nation**), the Kizh Nation Mitigation Measures prepared by the Gabrieleno Band of Mission Indians—Kizh Nation dated April 2020 (**Appendix IV.N.3: Kizh Nation Mitigation Measures**), the Cultural Resources Inventory Search dated March 11, 2020 (**Appendix IV.D.1: Cultural Resources Inventory Search**), and the Cultural Resource Inventory and Resource Documentation Technical Report dated April 16, 2021 (**Appendix IV.D.2: Cultural Resources Technical Report**).

Prior to the preparation of this Draft EIR, an Initial Study (**Appendix I.1**) was prepared using the CEQA Guidelines Environmental Checklist Form to assess potential environmental impacts resulting from construction and operation of the proposed Project associated with tribal cultural resources. Public Resources Code (PRC) Section 21080.3.1 (Assembly Bill [AB] 52) provides Native American tribes the opportunity to consult on a proposed public or private project should the tribe(s) be concerned there are potential impacts to tribal cultural resources. Seven tribal groups have requested notification by the City of any proposed projects. These tribes include the Gabrielino-Tongva Tribe, the Gabrieleno Tongva Indians of California Tribal Council, the Gabrielino/Tongva Nation, the Torres Martinez Desert Cahuilla Indians, the Gabrieleno/Tongva San Gabriel Band of Mission Indians, the Soboba Band of Luiseno Indians, and the Gabrieleno Band of Mission Indians—Kizh Nation. City initiated consultation with these tribes by letters dated January 28, 2020 and the 30-day period for responses ended on March 2, 2020. Only one response requesting for consultation were received from Gabrieleno Band of Mission Indians—Kizh Nation.

## 2. ENVIRONMENTAL SETTING

### Prehistoric Setting

The Gabrielino tribe were some of the earliest people to occupy the territory in what is now known as the City of Long Beach. This tribe had occupied almost the entire Los Angeles basin including the mountainous areas and the coast between Los Angeles and Orange counties.<sup>1</sup> The Gabrielino tribe had developed multiple types of structures within their villages consisting of domed, circular structures covered in tule, fern, or Carrizo used for family and communal housing as well as sweathouses, menstrual huts, and ceremonial enclosures.

The Puvungna-Gabrielino community was among the most researched and consisted of a large settlement and important ceremonial site most likely located in the area occupied by Rancho Los Alamitos and currently occupied by California State University, Long Beach.<sup>2</sup> It is assumed to have served as a ritual center for the surrounding Gabrielino communities in the region. Sites associated with Puvungna were added to the National Register of Historic Places in 1974 and 1982.

Santa Catalina island, which the Gabrielino people took as their territory, received Spanish contact in 1542 when Jaun Rodriguez Cabrillo arrived on the island.<sup>3</sup> Early Spanish settlers in the area had recorded populations of 50-200 Gabrielino people living in permanent villages and by 1770 the total population in the Los Angeles basin was over 5,000. Gaspar de Portola tried to colonize this Gabrielino territory and it is said that he made contact with the chief Hahamovic in the *Hahamog-na* village and in 1771, the Spanish established the Mission San Gabriel Archangel.

### Historic Setting

The Spanish arrived in the geographic area of the City of Long Beach around the late 18<sup>th</sup> century. During the Spanish and Mexican reign over Alta California, ownership of southern Los Angeles was largely distributed to government workers through land grants.<sup>4</sup> A man named Manuel Nieto, a Spanish soldier, was given around 300,000 acres of land by the governor of California in 1784 and following his death, the

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- 1 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.
  - 2 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.
  - 3 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.
  - 4 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

property was passed down to his heirs and divided into Rancho Los Alamitos and Rancho Los Cerritos. These two properties encompass what is now the City of Long Beach as well as Rancho Los Alamitos to the east and Rancho Los Cerritos to the west.

During the California Gold Rush in the late 1800's, people migrated into California at exponential rates, increasing the need for a cattle industry in both the north and south. The brothers Thomas and Benjamin Flint as well as their cousins Lewellyn and Jotham Bixby, invested in this growing market and purchased Rancho Los Cerritos.<sup>5</sup> Then in 1878, John Bixby leased Rancho Los Alamitos, which he eventually purchased from the owner and the property became known as Bixby Ranch. Over the years, the Bixby family rehabilitated the old ranch and both Rancho Los Cerritos and Rancho Alamitos properties operated as ranches into the early decades of the 20<sup>th</sup> century.

The second settlement in the City of Long Beach was created during 1810 when William Erwin Willmore proposed the development of a 4,000-acre site in Rancho Los Cerritos named Willmore City.<sup>6</sup> The development was to have a major street (now Long Beach Boulevard) which would connect the town to Los Angeles, and include waterfront resorts, a downtown business district, and 40-acre lots to be sold as family farm plots. After fruitless attempts to advertise the colony as the all-around perfect location for incoming residents, Willmore abandoned the development and the "American Colony" was purchased by the San Francisco real estate firm Pomeroy and Mills. The town was renamed Long Beach after the area's beaches and began to grow with the addition of a general store, hotel, a church, local newspaper (Long Beach Journal), as well as growing residences and businesses by 1885.

Alamitos Beach, Carroll Park, and Belmont Heights were annexed into Long Beach in the early 1900's and the population tripled as well as the acreage of the City.<sup>7</sup> Transportation throughout the City was improved with the addition of the Pacific Electric Streetcar Company and the Southern Pacific line and the San Pedro, Los Angeles, and Salt Lake Railroad (SPLA&SL) line expanded growth throughout the City. Tourism was the City's main attraction, including the Municipal Pier, Virginia Hotel, Majestic Dance Hall, and the Walk of a Thousand Lights.

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5 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

6 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

7 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

The Port of Long Beach opened in June of 1911 and in 1918 after major floods and the collapse of the Los Angeles Dock and Terminal Company, Long Beach and the U.S. Army Corps of Engineers permanently established regular navigation between Los Angeles and Long Beach.<sup>8</sup> This became a huge economic factor for the City and trade flourished. In 1921, oil was discovered by Shell Oil Company in Signal Hill, which was an unincorporated area at the time, but the sale of oil quickly became the City's primary industry. The financial gain from the oil boom more than doubled the City's population and the effects of the wealth led to a boost in skyscrapers in the downtown, creating a more sophisticated looking commercial and civic area in the City.

## **Existing Conditions**

From mid-1920s to 1998, the Project Site operated an oil production water treatment facility from oil wells located throughout Long Beach and Signal Hill. In 1926, Oil Operators, Inc. constructed a wastewater collection facility on the Project property. The facility was built to support the oil industry in the Long Beach/Signal Hill area. The wastewater collection facility treated produced water (oil field brines) recovered during oil production. The water treatment, primarily oil separation, took place in a series of on-site settling basins. The basins were designed to remove oil and sediment from the produced water and then discharge the treated water to the Los Angeles County Sanitation District sewer system. In 1959, a wastewater treatment plant was constructed at the facility. The treatment plant consisted of five circular concrete-walled skimming basins and associated pumps, aboveground storage tanks, pipelines and related small buildings and facilities. The wastewater treatment facility ceased operations in 1998.

The facilities were removed in 2001 with remnants of the facilities remaining on site, including old foundations, roads, and pipes underground. Remediation of the residual oil in the settling basins has been ongoing since 2001 and have been regularly tilled as part of the remediation activities. The Site is currently vacant, studded with mostly nonnative plants and is surrounding by temporary fencing. LA River borders the Site to the west, I-405 to the north, Golden Avenue and residential neighborhood to the east, and Wardlow Road to the south.

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8 City of Long Beach Historic Preservation Element, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element\\_6-22-2010](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/final-long-beach-historic-preservation-element_6-22-2010). Accessed March 2021.

### 3. REGULATORY SETTING

#### State

#### ***Assembly Bill 52***

AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) is filed.<sup>9</sup> The primary intent of AB 52 is to include California Native American tribes early in the environmental review process and to establish a new category of resources related to Native Americans, known as tribal cultural resources, which require consideration under CEQA. CEQA defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence.<sup>10</sup> PRC Section 21080.3.1<sup>11</sup> requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency must provide formal notification to the designated contact, or a tribal representative, of California Native American tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC section 21073) and who have requested in writing to be informed by the lead agency (PRC section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency’s formal notification and the lead agency must begin consultation within 30 days of receiving the tribe’s request for consultation (PRC sections 21080.3.1(d) and 21080.3.1(e)).

PRC section 21080.3.2(a)<sup>12</sup> identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project’s impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC section 21080.3.2(b)).

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9 AB-52 Native Americans: California Environmental Quality Act., An act to amend Section 5097.94 of, and to add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the Public Resources Code, relating to Native Americans.

10 PRC, Division 13. Environmental Quality Section 21080.3.2, “Chapter 2.4. Definitions.”

11 PRC, Division 13. Environmental Quality Section 21080.3.1, “Chapter 2.6. General, Tribal Consultation.”

12 PRC, Division 13. Environmental Quality Section 21080.3.2, “Chapter 2.6.”

If a California Native American tribe has requested consultation pursuant to PRC section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) of the statute and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND.<sup>13</sup> The statute further states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

### ***California Register of Historical Resources***

The California Register of Historical Resources (CRHR) is the authoritative guide to the State's significant archaeological and historical resources.<sup>14</sup> It closely follows the eligibility criteria of the NRHP but deals with State and local-level resources. The CRHR serves to identify, evaluate, register, and protect California's historical resources. For purposes of CEQA, a historical resource is any building, site, structure, object, or historic district listed in or eligible for listing in the CRHR (PRC, Section 21084.1). A resource is considered eligible for listing in the CRHR if it meets any of the following criteria:

1. *Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*
2. *Is associated with the lives of persons important in our past.*
3. *Embodies the distinctive characteristics of type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*
4. *Has yielded, or may be likely to yield, information important in prehistory or history (PRC Section 5024.1(c)).*<sup>15</sup>

Historical resources meeting one or more of the criteria listed above are eligible for listing in the CRHR. In addition to significance, resources must have integrity for a period of significance—the date or span of time

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<sup>13</sup> PRC, Division 13. Environmental Quality Section 21080.3.2, "Chapter 2.6."

<sup>14</sup> State of California, Office of Historic Preservation, California Historical Resources, <https://ohp.parks.ca.gov/listedresources>

<sup>15</sup> Public Resources Code (PRC), Division 5. Parks and Monuments[5001 - 5873], "CHAPTER 1. State Parks and Monuments," Article 2. Historical Resources (5024.1).

within which significant events transpired or significant individuals made important contributions. Important archaeological resources are required to be at least 50 years old to be considered. “Integrity is the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” Simply put, resources must “retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.”

### **California Environmental Quality Act**

CEQA also requires the lead agency to consider whether there is a significant effect on unique archaeological resources that are not eligible for listing in the California Register. As defined in CEQA, a unique archaeological resource is:<sup>16</sup>

*an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*

- 1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
- 2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.*
- 3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

If an archaeological resource is found eligible for listing in the CRHR, then it is considered under CEQA to be a historic resource that needs to be protected. This may also apply to unique archaeological resources. If a historic resource may be impacted by activity, under CEQA, avoidance and preservation in place is the preferred alternative. If that is not possible, then a data recovery plan will need to be created and enacted to lessen impacts to the environment to a less than significant level. If the archaeological resource is not eligible for listing in the CRHR, and it is not a unique archaeological resource, then no further action is required to protect or mitigate possible impacts to it.

### **California Health and Safety Code**

The discovery of human remains is regulated per California Health and Safety Code, Section 7050.5, which states the following: <sup>17</sup>

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16 PRC Section 21083.2(a).

17 California Health and Safety Code, Division 7, Dead Bodies, Section 7050.5

*In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation...until the coroner...has determined...that the remains are not subject to...provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible... The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and...has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.*

### **California Public Resources Code Section 5097.98**

Section 5097.98 provides procedures in the event human remains of Native American origin are discovered during project implementation.<sup>18</sup> The statute requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. The statute further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the Site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the landowner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

### **Office of Historic Preservation**

The Office of Historic Preservation (OHP), an office of the California Department of Parks and Recreation, implements the policies of the NRHP on a Statewide level. The OHP works to preserve California's heritage resources by ensuring that projects and programs carried out or sponsored by federal, State, and local agencies comply with federal and State historic preservation laws.

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18 Public Resources Code, Division 5. Parks and Monuments, "Chapter 1.75. Native American Historical, Cultural, and Sacred Sites," Section 5097.98.

## Local

### *City of Long Beach*

The City of Long Beach's (City) General Plan does not identify any goals or policies related specifically to tribal resources or tribal cultural preservation ordinance or program in effect.

## 4. TRIBAL CONSULTATION

A Cultural Resource Inventory search was conducted and a literature review was completed on February 25, 2020 to provide information on tribal cultural resources in the Project area. The search included a cultural literature review and records search of the California Historic Resource Information System (CHRIS). Also, as part of the Cultural Resources Inventory search, PaleoWest contacted the Native American Heritage Commission (NAHC) to request a search of the Sacred Lands File (SLF). The SLF would determine if the NAHC had any knowledge of Native American cultural resources within the immediate vicinity of the Project area. The SLF search returned with a negative result for cultural resources in the area, but the NAHC recommended that tribal groups be contacted to elicit information regarding cultural resource issues related to the proposed Project (see **Appendix 4.D.1**).

The City has on file eight requests from individuals representing seven California Native American tribes traditionally and culturally affiliated with the project area who have requested notice pursuant to PRC Section 21080.3.1(d). As required by PRC Section 21080.3.1 (added to the PRC by AB 52), the City initiated consultation with these tribes by letters dated January 28, 2020 and the 30-day period for responses ended on March 2, 2020 (**Appendix 4.N.1**). The following individuals were contacted by the City: Mr. Charles Alvarez – Gabrielino-Tongva Tribe, Ms. Linda Candelaria – Gabrielino- Tongva Tribe, Mr. Robert F. Dorame – Gabrieleno Tongva Indians of California Tribal Council, Ms. Sandonne Goad – Gabrielino/Tongva Nation, Mr. Michael Mirelez – Torres Martinez Desert Cahuilla Indians, Mr. Anthony Morales – Gabrieleno/Tongva San Gabriel Band of Mission Indians, Mr. Joseph Ontiveros – Soboba Band of Luiseno Indians, and Mr. Andrew Salas – Gabrieleno Band of Mission Indians—Kizh Nation.

One response was received by the City from Mr. Andrew Salas of the Gabrieleno Band of Mission Indians—Kizh Nation requesting consultation. The tribal response letter dated February 3, 2020, confirmed that the proposed Project location was within the tribe's Ancestral Tribal Territory (**Appendix 4.N.2**). Their Tribal Government had thus requested to schedule a consultation with the lead agency to discuss the Project and surrounding location in further detail.

Due to the unusual circumstances surrounding the COVID-19 pandemic, an in-person consultation was not conducted. Consultation was conducted via phone and email. A second letter was provided identifying suggested mitigation measures appropriate for the proposed Project. Mitigation measures included Native American Monitoring/Consulting provided by a documented lineal descendant from the ancestral Tribe of the project area, Unanticipated Discovery of Tribal Cultural and Archaeological Resources, PRC Sections

21083.2(b), Unanticipated Discovery of Human Remains and Associated Funerary Objects, Resources Assessment & Continuation of Work Protocol, Kizh—Gabrieleno Procedures for burials and funerary remains, Treatment Measures, and Professional Standards.

As a result of these outreach efforts, the City has agreed to incorporate the mitigation measures recommended by the Gabrieleno Band of Mission Indians—Kizh Nation. Consultation on the Project was completed in September 2021.

## 5. ENVIRONMENTAL IMPACTS

### *Thresholds of Significance*

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may have a significant impact related to tribal resources if it would:

- a) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC §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:**

**Threshold 4. TCR-1: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC § 5020.1(k).**

**Threshold 4. TCR-2: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

## 6. METHODOLOGY

Existing available data provided by the cultural literature review and records search of the California Historic Resource Information System (CHRIS) and SLF, and AB 52 consultation with the Gabrieleno Band of Mission Indians—Kizh Nation tribe were used to determine the known location of TCRs and sensitive locations, which would have a high probability to encounter TCRs. The data on sensitive locations would help determine the level of potential impact the proposed Project would have on tribal resources and if any mitigation measures would be required. The potential project impact level on TCRs after incorporation of mitigation measures, if any, would also be assessed to determine the final proposed Project impacts on TCRs.

## 7. PROJECT IMPACTS

- a) **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC §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:**

**Threshold TCR-1: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC § 5020.1(k)**

For purposes of this analysis, a tribal cultural resource (TCR) is considered a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe.

A records search was conducted, which included the Project Site and a quarter-mile radius, for the purpose of identifying any known cultural resources within the vicinity of the Project Site.<sup>19</sup> The records search included a review of the Office of Historic Preservation Archaeological Determination of Eligibility, the Office of Historic Preservation Directory of Historic Properties Data File, and a literature review by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. The records search indicated that the Project Site has been developed since the 1950s and historical archaeological resources may exist on site.

Additionally, a cultural resources field survey was completed to assess historic resources on-site.<sup>20</sup> During the field visit, the archaeologist walked over the Project Site and inspected landforms which were likely to contain or exhibit archaeological or historical remains. Cultural resources identified during the survey were recorded on appropriate California Department of Parks and Recreation (DPR) Series 523 forms. For this study, a cultural resource is defined as any archaeological remains or standing building or structure that are greater than 45 years of age. Based on the findings of the cultural resource inventory, the historic-era remnants of the oil wastewater treatment facility (20-124-01H) and the in-use historical Baker Street roadway, were documented and evaluated for listing on the California Register Historical Resources (CRHR). Both resources were found to be ineligible for CRHR listing and does there are no indication these resources are significant TCRs as defined in in PRC Section 21074. For details regarding the historical use of Baker Street roadway and the historic-era remnants, please refer to **Section IV.D: Cultural Resources**.

Based on the cultural resources inventory and field survey findings, the remnants of the oil wastewater treatment facility (20-124-01H) and the segment of Baker Street on the Project Site were not determined to be eligible for listing on the CRHR. In addition, the Project Site has been highly and frequently disturbed

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19 PaleoWest, Cultural Resource Inventory for the Long Beach River Park, March 11, 2020, **Appendix IV.D.1**.

20 PaleoWest, Cultural Resource Inventory and Resource Documentation for the Long Beach River Park, April 16, 2021, **Appendix IV.D.2**.

by the construction, removal, and bioremediation of the former wastewater treatment facility site. As such, it is unlikely that any intact buried archaeological remains are present in the Project area.

Regardless, ground disturbance has the potential to unearth unknown TCRs which would be addressed by mitigation measures included later on in this section. The proposed Project would not cause a substantial adverse change in the significance of TCRs eligible for CRHR or local register listing. Impacts to TCRs eligible for listing would be less than significant.

**Threshold TCR-2: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

For purposes of this analysis, a TCR is considered a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe.

As previously mentioned, a cultural resources inventory search was conducted, concluding that no historic or prehistorical archaeological resources were identified within the recorded search area.<sup>21</sup> The NAHC reported that the results of the SLF search were negative for cultural resources identified in the Project area, but they recommended that the City reach out to any tribal contacts relevant to the area in order to ensure that no TCRs might be present. AB 52 consultation letters were sent out on January 28, 2020 and a request for consultation was received on February 3, 2020 from the Gabrieleno Band of Mission Indians—Kizh Nation. At the conclusion of the consultation process, the City received the Protection of TCRs Letter, including mitigation measures recommended by the Gabrieleno Band of Mission Indians—Kizh Nation. The letter with recommended mitigation measures can be found in **Appendix IV.N.3** of this Draft EIR.

In accordance with AB 52, the City contacted local tribes to request consultation regarding the project and have received the Protection of Tribal Cultural Resources letter from the Gabrieleno Band of Mission Indians—Kizh Nation.<sup>22</sup> The letter includes mitigation measures recommended by the Tribe. The mitigation measures focused on monitoring procedures during construction, which would be conducted by a Tribal monitor/consultant who is both ancestrally affiliated with the Project area and approved by Gabrieleno Band of Mission Indians—Kizh Nation. These measures are incorporated into this proposed Project and are discussed below.

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21 PaleoWest, Cultural Resource Inventory for the Long Beach River Park, March 11, 2020, **Appendix IV.D.1.**

22 Gabrieleno Band of Mission Indians—Kizh Nation, Protection of Tribal Cultural Resources (TCRs), April 2020, **Appendix IV.N.3.**

Ground disturbing activities that would be employed during construction of the proposed Project would include site clearing, bioremediation, grubbing, and grading. As a result, these activities may disturb unknown TCRs as well as human remains, including those interred outside of dedicated cemeteries. Lands within the footprint of the proposed Project are not known to contain any unmarked graves or human remains. However, the proposed Project includes ground disturbance activities which has the potential to expose previously unknown human remains, including Native American remains.

No tribal cultural resources as defined in PRC Section 21074(a) and (b) have been identified as a result of the inventory searches, field survey, or consultation conducted for the proposed Project. Operation of the proposed Project would not involve ground disturbing activities with the potential to unearth or impact on site TCRs or result in substantial adverse change in the significance of TCRs. Potential construction Impacts to PRC Section 5024.1 resources would be less than significant with mitigation measures implemented below.

## 8. CUMULATIVE IMPACTS

A cumulative analysis for TCR's evaluates whether impacts of the proposed Project and related projects, when taken as a whole, would have a significant environmental impact on TCR's. The geographic area for cumulative analysis of TCR's is the City of Long Beach. The City is almost completely built out with most new development occurring as in-fill development, such as the proposed Project.

The cumulative context for TCRs is within the Gabrieleno Tribal Territory which encompasses land within Los Angeles County. As previously stated, there were no TCRs identified within the Project Site. Additionally, the City has consulted with Tribal representatives and recognizes the potential sensitivity. The possible impacts to TCRs and human remains are mostly local and would not include surrounding areas unless a significant resource was identified. Since no TCRs are identified on site, and impacts to TCRs are typically highly localized, the proposed Project would result in a less than significant cumulative impact related to TCRs after the implementation of the proposed Mitigation Measures. No impacts to TCR's are anticipated during operation of the proposed Project since no ground disturbance is anticipated.

## 9. MITIGATION MEASURES

The following Mitigation Measures (MMs) have been identified and are based on available information and the AB 52 consultation process with the identified tribes as described in sub-heading *4: Tribal Consultation* of this section.

### **MM TCR-1: Retain a Native American Monitor/Consultant**

During ground disturbing construction activity, the Project Applicant shall be required to retain and compensate for the services of a single Tribal monitor/consultant who is both

ancestrally affiliated with the project area and approved by the Gabrieleño Band of Mission Indians—Kizh Nation Tribal Government, listed under the Native American Heritage Commission’s (NAHC) Tribal Contact list for the area of the project location. The Native American monitor shall be retained by the Lead Agency or owner of the project to be on site to monitor all initial project-related, ground-disturbing construction activities , defined by the Gabrieleño Band of Mission Indians—Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the Project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day’s activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the Project Site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the Site has a low potential for impacting Tribal Cultural Resources.

**MM TCR-2: Unanticipated Discovery of Tribal Cultural and Archaeological Resources**

Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians—Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If the qualified archaeologist determines a resource to constitute a “historical resource” or “unique archaeological resource,” time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources.

**MM TCR-3: PRC Section 21083.2(b)**

Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent

laboratory processing and analysis. All Tribal Cultural Resources shall be returned to the Tribe. Any historic archaeological material that is not Native American in origin shall be curated at a public, nonprofit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe or a local school or historical society in the area for educational purposes.

**MM TCR-4: Unanticipated Discovery of Human Remains and Associated Funerary Objects**

Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone, within 24 hours, the NAHC and PRC 5097.98 shall be followed.

**MM TCR-5: Resource Assessment & Continuation of Work Protocol**

Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by State law who will then appoint a Most Likely Descendent (MLD).

**MM TCR-6: Kizh—Gabrieleno Procedures for Burials and Funerary Remains**

If the Gabrieleno Band of Mission Indians—Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human

remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

**MM TCR-7: Treatment Measures**

Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The Site of reburial/repatriation shall be on the Project Site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

## 10. LEVEL OF SIGNIFICANCE AFTER MITIGATION

### Construction

Ground-disturbing activities that would be employed during construction of the proposed Project would include site clearing, bioremediation, grubbing, and grading. As a result, these activities may disturb TCRs and/or human remains, including those interred outside of dedicated cemeteries. Lands within the footprint of the proposed Project are not known to contain any unmarked graves or human remains. However, the loss of any previously unknown human remains, including native American remains, may be significant.

A Tribal Monitor would be retained to oversee all Project-related ground disturbing construction activities in accordance with **MM TCR-1**. Monitoring would ensure any unknown TCRs that are unearthed during ground disturbing activities are identified and protected. **MM TCR-2** and **MM TCR-3** discuss the discovery of any tribal cultural or archaeological resources and the proper treatment of each resource if found. Tribal resources are to be evaluated and qualified to determine treatment and curation of the item, while unique archaeological resources would be preserved in place until assessed. **MM TCR-2** and **MM TCR-3** ensures unearthed TCRs are properly processed post discovery. If Native American human remains are unearthed, **MM TCR-4** through **MM TCR-7** state that a County Coroner must be contacted to identify the remains and if they are those of a Native American, the coroner must contact the NAHC and PRC 5097.98 shall be followed. Construction work would be diverted while identification of the remains is in progress. If the Gabrieleno Band of Mission Indians—Kizh Nation is designated as a Most Likely Descendent (MLD), traditional Koo-nas-gna Burial Policy would take place. Additionally, in the case where discovered human remains cannot be fully documented and recovered on the same day, the remains shall be protected until an arrangement is made for the remains relocation or re-burial. With the implementation of **MM TCR-4** through **MM TCR-7**, Native American human remains would be properly processed and impacts to human remains found on site would be reduced to a less than significant level.

With implementation of **MMs TCR-1** to **MM TCR-7**, potentially significant impacts to TCRs and human remains would be reduced to a level that is less than significant. These measures would work to prevent the destruction and loss of sensitive TCRs and ensure the proper disposition of human remains. There are no significant unavoidable adverse impacts of the proposed Project related to TCRs. The proposed Project would have less than significant impacts with mitigation measures incorporated.

### Operation

There are no significant impacts associated with the operation of the proposed Project. Impacts would be less than significant.

**1. INTRODUCTION**

This section of the Draft EIR provides a discussion of utilities, applicable laws, and regulations associated with utilities and analysis of the potential effects resulting from implementation of the proposed Project.

**2. ENVIRONMENTAL SETTING**

**Existing Conditions**

***Water Supply***

The Long Beach Water Department (LBWD) provides water to the majority of Long Beach (City), including the Project Site.<sup>1</sup> A majority of the water provided to the City is imported water that is purchased wholesale from the Metropolitan Water District of Southern California (MWD). Other sources of water include groundwater pumped and treated by LBWD, and recycled water. **Table IV.O-1: Existing and Future Water Supplies (AFY)** shows the current and planned water supplies for Long Beach in acre-feet per year (AFY).<sup>2</sup>

**Table IV.O-1  
Existing and Future Water Supplies (AFY)**

Source	Year						
	2020	2025	2030	2035	2040	2045	2050
Groundwater – Central Basin	21,932	37,126	37,126	41,126	41,126	41,126	41,126
Groundwater – West Coast Basin	0	0	0	0	0	0	0
Imported	29,472	30,900	30,900	30,900	30,900	30,900	30,900
Recycled	13,495	13,500	13,500	13,500	13,500	13,500	13,500
<b>Total</b>	<b>64,898</b>	<b>84,752</b>	<b>84,752</b>	<b>88,752</b>	<b>88,752</b>	<b>88,752</b>	<b>88,752</b>

Source: Long Beach Water Department, 2020 Urban Water Management Program, Table 6-5.

1 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.  
 2 An acre-foot is 325,585 gallons.

## Local Water

The City retrieves groundwater from wells located throughout the City limits and has water rights to pump approximately 33,000 AFY; this amount fulfills about 60 percent of the City's overall needs.<sup>3</sup> The major aquifers beneath the City are known as the 400-foot Gravel, the 200-foot Sand, and the Gaspur Zone.<sup>4</sup> These aquifers have a capacity for storing approximately 30 million acre-feet of water. Aquifers provide the source of water found in groundwater basins, which are used for domestic water supply. Groundwater use for domestic water supply is a major beneficial use of groundwater basins in Los Angeles County. The City retrieves its groundwater from the Central Basin and the West Coast Basin. The Central Basin was seriously over drafted by the 1940's, which led to adjudication of the basin in the 1960's and LBWD becoming the owner of the largest allowable pumping allocation (APA)<sup>5</sup> in the Central Basin.<sup>6</sup> Since the adjudication, the combination of limits on groundwater extractions and active replenishment have allowed the basin to recover to sufficient levels. Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins, as well as injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water. The Long Beach Water Reclamation Plant (LBWRP) processes the City's water that has already undergone primary and secondary treatment and is then redistributed throughout the City. The LBWRP treats approximately 18 million gallons of water per day (MGD) which can be used for watering large parks, golf courses, cemeteries, and athletic fields or other non-potable needs throughout the City.<sup>7</sup> Recycled water is also incorporated into the City's supplies through percolation and natural runoff as it seeps into the groundwater basin.<sup>8</sup> This process is a reliable source of replenishment during times of fluctuations.

## Imported Water

The LBWD purchases water wholesale from MWD to supplement local groundwater and recycled water. The water imported by MWD originates from the Colorado River Aqueduct, which is controlled by MWD.

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3 Long Beach Water, Ground and Imported Water, <https://www.lbwater.org/water-sources/ground-and-imported-water/#ground-water>. Accessed March 2021.

4 City of Long Beach General Plan, Conservation Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/general-plan/1973-conservation-element>, accessed March 2021.

5 The total annual right to extract water on an on-going basis.

6 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

7 Long Beach Water Department, Reclaimed/Recycled Water, <https://www.lbwater.org/water-sources/reclaimed-recycled-water/>, accessed May 2021.

8 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

The MWD provides about half the water consumed annually by the 19 million people in the Southern California coastal plain.<sup>9</sup>

### ***Wastewater Conveyance and Treatment***

The LBWD operates and maintains the City’s sanitary sewer system and the City’s wastewater treatment services are provided by the Sanitation Districts of Los Angeles County (LACSD). The LACSD operates and maintains the regional wastewater collection system, which includes approximately 1,400 miles of sewers, 48 pumping plants and 11 wastewater treatment plants.<sup>10</sup> The LACSD own, operate and maintain the large trunk sewers that form the backbone of the regional wastewater conveyance system within a service area that includes 850 square miles and 78 cities and unincorporated areas in the county. The Project is within the Joint Water Pollution Control Plant (JWPCP) service area located at 24501 South Figueroa Street in Carson.<sup>11</sup> This facility currently provides primary and secondary treatment for a capacity of 400 million gallons of wastewater per day and serves over 4.8 million residents, businesses, and industries. Before discharging, treated wastewater is disinfected and the effluent is sent to the Pacific Ocean through a network of outfalls.

### ***Solid Waste***

The majority of solid waste produced in the City is taken to the Southeast Resource Recovery Facility (SERRF).<sup>12</sup> The SERRF is jointly owned by the LACSD and the City.<sup>13</sup> The facility accepts nonhazardous municipal solid waste and converts it to energy through incineration. In 2019, the City was reported to have disposed of approximately 502,098 tons of waste.<sup>14</sup> Solid waste from the Project Site would be collected and trucked to the SERRF, as the closest active solid waste facility operated by LACSD. SERRF performs “front-end” and “back-end” recycling by recovering items such as white goods prior to incineration and collecting metals removed from the boilers after incineration. The incineration process starts with a thorough search of the solids, making sure that no radioactive material or noncombustible material is left over.<sup>15</sup> The waste is then incinerated and any ash is quickly discharged into a water tank to

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9 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

10 Los Angeles County Sanitation Districts (LACSD), About Us, <https://www.lacsd.org/aboutus/default.asp>, accessed April 2021.

11 LACSD, Wastewater Treatment Plants, <https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/default.asp>, accessed April 2021.

12 City of Long Beach, Waste Reduction, <http://www.longbeach.gov/sustainability/green-urban-services/waste-reduction/>, accessed April 2021.

13 LACSD, Refuse to Energy Facilities, <https://www.lacsd.org/services/solidwaste/rtefac/serrf/default.asp>, accessed April 2021.

14 CalRecycle, Disposal Rate Calculator, <https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DisposalRateCalculator>, accessed May 2021.

15 City of Long Beach, Energy Resources, SERRF, <http://www.longbeach.gov/energyresources/about-us/serff/>, accessed April 2021.

remove the particulates from the air and a Thermal DeNox system injects ammonia into the chamber to control nitrogen oxides. Then, the combustion gases move through a dry scrubber and baghouse to remove additional toxic gases such as sulfur dioxide, hydrochloric acid, and additional particulate matter. Steam generated from this process is partially used to operate the facility and the rest is sold to SCE for redistribution. The leftover ash is treated and used as road base material. Solid waste that cannot be processed in this facility was previously transported to the Puente Hills Landfill. However, as of October 2013, the Puente Hills Landfill closed after 56 years of operation.<sup>16</sup> In addition to the SERFF, the County continues to address landfill capacity through the preparation of annual County of Los Angeles Integrated Waste Management Plan (CoIWMP) reports, which evaluates and plans for future landfill capacity based on expected growth forecasts.<sup>17</sup>

### ***Stormwater Conveyance***

The Stormwater and Environmental Compliance Division of the City's Public Works Department is responsible for maintaining the storm drain system and monitoring stormwater quality within the City in coordination with the Los Angeles County Flood Control District (LACFCD). The Project Site does not currently have a drainage system. The highest elevation on-site is approximately 52.96 feet near the northeast corner of the Project Site and the lowest elevation is approximately 29.69 feet at the westerly boundary of the Project Site within Baker Street. The higher elevations tend to be along the easterly boundary of the Site and the lower elevations tend to be along the westerly boundary of the Site. Within the center of the Site are large basins which are remnants from the former water treatment facility. Most of the Project Site drains into one of these basins due to their lower elevation when compared to the rest of the Site. A portion of Golden Avenue and Baker Street also drains into the Site.<sup>18</sup> There is a City maintained storm drain system available adjacent to the Project Site which drains into the Los Angeles River.

### ***Energy***

Southern California Edison (SCE) and the Long Beach Energy Resources (LBER) provide electricity and natural gas services to the City.

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16 LACSD, Landfills, <https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/default.asp>, accessed April 2021.

17 Los AngelesCounty Integrated Waste Management Plan, <https://pw.lacounty.gov/epd/swims/ShowDoc.aspx?id=14372&hp=yes&type=PDF>

18 Preliminary Drainage Study, Appendix IV.I.1, April 22, 2020.

## Electricity

The Project Site is within the SCE service area. The SCE service area covers 50,000 square miles and includes 15 counties, which serve approximately 15 million people in central, coastal, and Southern California.<sup>19</sup> The SCE planning area used approximately 105,162 GWh of electricity in 2019.<sup>20</sup> The SCE estimates that electricity consumption within its planning area would be approximately 125,000 GWh annually by 2027, when the proposed Project would be fully built out.<sup>21</sup>

Furthermore, SCE supplies power to homes and businesses via different plan options, including “Green Rates.”<sup>22</sup> The Green Rate gives consumers the opportunity to purchase renewable energy. By participating in the Green Rate, consumers support local solar power, reducing greenhouse gas (GHG) emissions associated with electricity. To support this effort, SCE purchases additional renewable energy to meet the needs of Green Rate participants from solar renewable developers within the SCE service territory. This is a voluntary program available to both residential and nonresidential energy users who receive power generation, metering, and related services from SCE. In 2017, SCE released *The Clean Power and Electrification Pathway* (Pathway) which presents SCE’s integrated blueprint to meet the State’s goal of 40 percent reduction in GHG emissions from 1990 levels by 2030.<sup>23</sup> Specifically, SCE’s Pathway calls for:

- An electric grid supplied by 80 percent carbon-free energy;
- More than 7 million electric vehicles on California roads; and
- Using electricity to power nearly one-third of space and water heaters, in increasingly energy-efficient buildings.

The nearest transmission lines to the Project Site include two north/south 220 kilovolt (kV) lines and one north/south 69 KV line approximately 0.33 miles to the west.<sup>24</sup> No electricity is currently used on the vacant Project Site.

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19 Southern California Edison (SCE), Southern California Edison’s Service Area, <https://www.sce.com/about-us/who-we-are/leadership/our-service-territory>. Accessed April 2021.

20 CEC, California Energy Consumption Database, Electricity Consumption by Planning Area, <http://ecdms.energy.ca.gov/elecbyplan.aspx>. Accessed April 2021.

21 CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, <https://efiling.energy.ca.gov/getdocument.aspx?tn=223244>. Accessed April 2021.

22 SCE, Green Rates, <https://www.sce.com/residential/rates/standard-residential-rate-plan/green-rates>. Accessed April 2021.

23 SCE, The Clean Power and Electrification Pathway, <https://www.edison.com/home/our-perspective/clean-power-and-electrification-pathway.html>. Accessed April 2021.

24 California Energy Commission, Electric Infrastructure Map, <https://cecgis-caenergy.opendata.arcgis.com/app/ad8323410d9b47c1b1a9f751d62fe495>. Accessed April 2021.

## Natural Gas

According to the CEC's California Energy Consumption Database, the State of California consumed 13,158 million Therms<sup>25</sup> of natural gas in 2019,<sup>26</sup> with demand projected to decrease to 12,800 million Therms in 2030,<sup>27</sup> the furthest year of currently available projections.

Natural gas for the proposed Project area is provided by the City Energy Resources Department (LBER). LBER provides natural gas to approximately 500,000 residents and businesses in Long Beach and Signal Hill and delivers gas through more than 1,800 miles of pipelines.<sup>28</sup> Natural gas for LBER is purchased on the open competitive market. Based on the 2020 California Gas Report, LBER supplied approximately 26.3 millions of cubic feet (MMcf) of natural gas per day in 2020 and is expected to remain consistent and supply 26.3 MMcf of natural gas per day in 2027, when the proposed Project would be fully built out.<sup>29</sup> The Project Site is currently vacant and no natural gas is used.

## Telecommunications

Spectrum Communications, Frontier Communications, and AT&T U-verse provide telecommunication and internet services to the City.<sup>30</sup> All three companies hold a franchise issued by the State's Public Utility Commission to be able to provide their services to residents.

In addition, the City owns approximately 60 miles of fiber optic cable in the City. This fiber optic network connects the Long Beach Airport, the Fire Headquarters, and Police Field Support within the City. The City intends on expanding the capacity of existing facilities and adding more fiber optic facilities to address the growing demand for faster cable speeds, greater bandwidths, more reliable data transmission, and to accommodate more flexibility for the future.<sup>31</sup>

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25 One Therm is equivalent to 100,000 British thermal units (BTU) or 100 kBTU. A Therm is approximately the energy equivalent of burning 100 cubic feet (1 cf) of natural gas. The conversion of kBTU to cubic feet uses the factor of 1 cf to 1.037 kBTU.

26 CEC, California Energy Consumption Database, Gas Consumption by County, <https://ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed April 2021.

27 CEC, Final 2019 Integrated Energy Policy Report, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report>. Accessed April 2021.

28 City of Long Beach, Energy Resources, <http://www.longbeach.gov/energyresources/>. Accessed April 2021.

29 California Public Utilities Commission, 2020 California Gas Report, [https://www.socalgas.com/sites/default/files/2020-10/2020\\_California\\_Gas\\_Report\\_Joint\\_Utility\\_Biennial\\_Comprehensive\\_Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf). Accessed April 2021.

30 Long Beach, Technology and Innovation, <http://longbeach.gov/ti/telecommunications/>, accessed April 2021.

31 City of Long Beach. Recirculated Draft EIR- General Plan Land Use and Urban Design Elements Project. June 2019. Accessed April 30, 2021.

### 3. REGULATORY SETTING

#### Federal

##### *Water Supply*

##### **Clean Water Act (CWA)**

The federal Clean Water Act (CWA) establishes regulatory requirements for potable water supplies, including raw and treated water quality criteria. Long Beach is required to monitor water quality and conform to the regulatory requirements of the CWA.

##### **Safe Drinking Water Act (SDWA)**

The federal Safe Drinking Water Act (SDWA) establishes standards for contaminants in drinking water supplies. Maximum contaminant levels and treatment techniques are established for each of the contaminants. The listed contaminants include metals, nitrates, asbestos, total dissolved solids, and microbes.

##### *Solid Waste*

##### **Resource Conservation and Recovery Act**

The Resource Conservation and Recovery Act (RCRA) is the nation's primary law governing the disposal of solid and hazardous waste. The RCRA sets national goals for reducing the amount of waste generated and for ensuring that wastes are managed in an environmentally sound manner. The Solid Waste Program, established under RCRA, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills, and prohibits the open dumping of solid waste. RCRA regulations also encourage source reduction and recycling and promote the safe disposal of municipal waste. RCRA and the California Hazardous Waste Control Law regulations are enforced by the California Department of Toxic Substances Control, the State Division of Occupational Safety and Health, the County Department of Health, and the County Fire Department. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.<sup>32</sup> The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste, as well as corrective action for releases.<sup>33</sup> Some of the other mandates of this law include increased enforcement authority for EPA, more

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32 United States Environmental Protection Agency, Summary of Resource Conservation and Recovery Act, <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>, accessed April 2021.

33 United States Environmental Protection Agency, Summary of Resource Conservation and Recovery Act, <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>, accessed April 2021.

stringent hazardous waste management standards, and a comprehensive underground storage tank program.

### **Building-Related Construction and Demolition Materials Amounts**

Construction and demolition (C&D) materials are generated when new structures are built and when existing structures are renovated or demolished (including deconstruction activities). Structures include all residential and nonresidential buildings, as well as public works projects, such as streets and highways, bridges, utility plants, piers, and dams.<sup>34</sup> The U.S. Environmental Protection Agency (USEPA) has targeted C&D materials for reduction, reuse, and recovery as part of its Resource Conservation Challenge (RCC). The RCC is a national effort to conserve natural resources and energy by managing materials more efficiently. The goals of the RCC are to prevent pollution and promote reuse and recycling, reduce priority and toxic chemicals in products and waste, and conserve energy and materials.

## **State**

### ***Water Supply***

#### **Safe Water Drinking Act (1976)**

California enacted its own Safe Water Drinking Act. The California Department of Health Services (DHS) has been granted primary enforcement responsibility for the SDWA. Title 22 of the California Administrative Code establishes DHS authority and stipulates drinking water quality and monitoring standards. These standards are equal to or more stringent than federal standards

#### **California Plumbing Code**

Part 5 of the California Building Code establishes the California Plumbing Code.<sup>35</sup> The California Plumbing Code sets forth efficiency standards (i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures, including showerheads and maximum lavatory faucets. The maximum flow rate for public lavatory faucets is 0.5 gallon per minute (gpm). In addition, all water closets (i.e., flush toilets) are limited to 1.28 gallons per flush, wall mounted urinals are limited to 0.125 gallon per flush, and floor mounted urinals are limited to 0.5 gallon per flush. The 2019 California Building Code became effective January 1, 2020.

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34 United States Environmental Protection Agency, Estimating 2003 Building Related Construction and Demolition Materials Amounts, <https://www.epa.gov/sites/production/files/2017-09/documents/estimating2003buildingrelatedcanddmaterialsamounts.pdf>, accessed April 2021.

35 California Code of Regulations, Title 24.

## **California Urban Water Management Planning Act**

Section 10610 of the California Water Code contains the California Urban Water Management Planning Act (CUWMPA), which requires urban water suppliers to initiate planning strategies to ensure an appropriate level of reliability in its water service. Under the CUWMPA, every urban water supplier that provides water to 3,000 or more customers, or that annually provides more than 3,000 acre-feet of water service, should make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The CUWMPA describes the contents of UWMPs as well as methods for urban water suppliers to adopt and implement the plans.

## **Senate Bill X7-7 (California Water Code Section 10608)**

In February 2008, the California legislature introduced a seven-part comprehensive plan for improving the Sacramento-San Joaquin Delta. As part of that effort, several State agencies were directed to develop a plan to reduce per capita water use Statewide by 20 percent by the year 2020. Legislation titled the “Water Conservation Act of 2009” (SBX7-7) enacted the 20 x 2020 plan. As part of the 20 x 2020 plan, all retail water agencies in the State are required to detail how they plan to achieve the mandatory reductions through their UWMP. Retail water agencies who have either 3,000 or more connections or provide 3,000 AF or more of water per year, are required to comply with SBx7-7.

## **Statewide Water Reductions – Executive Orders B-29-15, B-36-15, and B-37-16**

In response to California’s drought conditions, in January 2014, Governor Edmund G. Brown, Jr. (Governor Brown) proclaimed a State of Emergency and directed State officials to take all necessary action to make water available. The following April, Governor Brown issued Executive Order B-29-15 calling for mandatory water reduction measures directed at conserving water use, streamlining the State’s drought response, and investing in new technologies to make the State more drought resilient. The governor ordered that the

*SWRCB shall impose restrictions to achieve a Statewide 25 percent reduction in potable urban water usage through February 28, 2016. These restrictions require water suppliers to California’s cities and towns to reduce usage as compared to the amount used in 2013 and consider the relative per capita water usage of each water suppliers’ service area, and require that those areas with high per capita use achieve proportionally greater reductions than those with low use.*

On July 15, 2015, the SWRCB released the water-use reduction targets that were imposed on each individual urban water supplier. Then based on rainfall the reduction targets were revised and the new targets became effective March 1, 2016.

On November 13, 2015, Governor Brown issued Executive Order B-36-15, which called for additional actions to build on the State’s response to record dry conditions and assist recovery efforts from devastating wildfires. These include extensions of previous executive orders, prioritization of projects that enhance water conservation, support for the extension of water restrictions, and support for projects that remediate wildfire damage and restore power plant operation.

On May 9, 2016, Governor Brown issued Executive Order B-37-16 “Making Water Conservation a California Way of Life” which builds on temporary Statewide emergency water restrictions set forth by Governor Brown and the SWRCB in 2015, to establish longer-term water conservation measures for California. In response to the extreme and persistent drought conditions along with warmer weather and reduced snowpack expected for the State, the 2016 executive order directs permanent changes to use water more wisely, eliminate water waste, strengthen local drought resistance, and improve agricultural water use efficiency and drought planning. The order requires permanent monthly water use reporting, and new permanent water use standards in California communities. To help eliminate water waste, the SWRCB is to prohibit wasteful water practices such as hosing off sidewalks, driveways and other hardscapes, or watering lawns in a manner that causes runoff.

On April 7, 2017, Governor Brown issued Executive Order B-40-17, which lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects continued to help address diminished groundwater supplies. B-40-17 also rescinded two emergency proclamations from January and April 2014 and four drought-related Executive Orders issued in 2014 and 2015. Executive Order B-40-17 built on actions taken in Executive Order B-37-16, which remains in effect, to continue making water conservation a way of life in California.

### **Sustainable Groundwater Management Act of 2014**

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739, SB 1168, and SB 1319, collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within twenty years of implementing their sustainability plans. For critically over-drafted basins, which would be 2040. For the remaining high and medium priority basins, 2042 is the deadline. Through the Sustainable Groundwater Management Program, DWR provides ongoing support to local agencies through guidance and financial and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial

groundwater basins in California.<sup>36</sup> The City retrieves its water supply from the local groundwater basin known as the Central Basin.<sup>37</sup> Up until 2015, LBWD has been consistently working with MWD and the Water Replenishment District (WRD) to use a portion of its APA to replenish the groundwater basin through in-lieu means. Therefore, each year LBWD retires the rights to pump a portion of its APA and receives compensation from WRD to purchase additional imported water from MWD. LBWD has not had to use in-lieu means to utilize a portion of its APA from the 2016 – 2019 timeframe but did so for 5,000AF in 2020. Additionally, over the years, more sustainable groundwater management has been achieved and the basin is able to be replenished through precipitation, recycled water, in-lieu replenishment, imported water, and seawater barrier operations. LBWD's supplies from groundwater, imported water purchased from MWD, and recycled water are expected to be reliable for at least the next 30 years.

## ***Solid Waste***

### **California Integrated Waste Management Act of 1989 (AB 939)**

The California Integrated Waste Management Act of 1989 required each city or county's source reduction and recycling element to include an implementation schedule showing that a city or county must divert 50 percent of solid waste from landfill disposal or transformation on and after January 1, 2000. SB 1016, passed in 2008, now requires the 50 percent diversion requirement to be calculated in a per capita disposal rate equivalent.

## ***Stormwater Conveyance***

### **National Pollution Discharge Elimination System (NPDES)**

The CWA requires coverage under an NPDES construction permit for stormwater discharges to surface waters associated with various construction activities, except activities that result in disturbance of less than 1 acre of total land area which are not part of a larger common plan of development or sale. The SWRCB has issued a Statewide NPDES Construction General Permit for stormwater discharges from construction sites (Water Quality Order No. 2009-0009-DWQ). Any project that disturbs an area of more than 1 acre, as well as linear underground/overhead project's disturbing over 1 acre, require a NOI to discharge under the Construction General Permit. The Construction General Permit includes three levels of risk for construction sites based on calculated project sediment and receiving water risk. The Construction General Permit includes measures to eliminate or reduce pollutant discharges through implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes the implementation

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36 California Department of Water Resources, SGMA Groundwater Management, <https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management>, accessed April 2021.

37 Long Beach Department of Water, 2020 Urban Water Management Plan (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

and maintenance of Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the Site during construction. The Construction General Permit contains receiving water limitations that require stormwater discharges to not cause or contribute to a violation of any applicable water quality standard. The permit also requires implementation of programs for visual inspections and sampling for specified constituents (e.g., nonvisible pollutants). In addition, based upon particular project risk levels, monitoring is required for stormwater discharges.

## ***Electricity***

### **California Code of Regulations Title 24**

Title 24 of the California Code of Regulations, which is known as the energy efficiency standards, regulates energy consumption in new construction. The standards regulate energy consumed in buildings for heating, cooling, ventilation, water heating, and lighting. Title 24 is implemented through the local plan check and permit process.

## **Local**

### ***Water Supply***

#### **Long Beach Water Department 2020 Urban Water Management Plan**

Urban water suppliers are required by California state law to submit an Urban Water Management Plan (UWMP) to the State Department of Water Resources at designated time periods; roughly once every five years, effective first on January 1, 1984. On June 25, 2021, the Long Beach Water Department (LBWD) submitted their draft 2020 UWMP after releasing it for public review on May 10, 2021. The 2020 UWMP is a detailed and comprehensive planning document that addresses a broad array of issues including: (1) future water demands in five-year increments over a minimum 20-year period; (2) the availability of future water supplies necessary to meet demands during average year conditions, both in a single dry water year and in multi-year droughts; (3) actions that would be taken if water supplies are reduced by as much as 50 percent; and (4) reasonable and practical efficient uses of water, recycling, and conservation activities in its service area. Instead of the typical 20-year forecast, LBWD's 2020 UWMP makes a 30-year forecast to allow for reference in future assessments completed between 2020 and 2025 when the next update is expected. Total water demand is projected to decline through 2030 as water efficiency continues to increase, then projected to continue to hold steady through 2040 as increasing water demand from population and economic growth are canceled out by reductions from conservation. By 2040, water demand is then projected to begin increasing to approximately 44,000 acre-feet by 2050 as population and economic growth surpasses the reductions in demand from conservation. Under this forecast, water use across all sectors are projected to remain steady or decline with the exception of irrigation water use, which is anticipated to increase. LBWD's supplies from groundwater, imported water purchased from MWD, and recycled water are expected to be reliable for at least the next 30 years.

## ***Wastewater Treatment and Conveyance***

### **Long Beach Municipal Code – Title 15 Chapter 15.01**

Title 15, Public Utilities, of the City Municipal Code (LBMC) includes seven chapters regulating wastewater line connections and the development of new wastewater facilities. Specifically, Chapter 15.01, Sewer-Rules, Regulations, and Charges, establishes that the current edition of the rules, regulations, and charges governing water and sewer service are to be approved by the Board of Water Commissioners. Chapter 15.08, Sewers-Permits, specifies that only employees of the water department are allowed to construct or alter a public sewer, a sewage pumping plant, a private sewer in a public street, or a house connection or make a connection from a building sewer to a house connection unless a permit from the general manager has been provided. Chapter 15.20, Sewers-Use Regulations, prohibits the discharge of the following items into any public sewer in the City:

- Earth, sand, rocks, ashes, gravel, plaster, concrete, glass, metal filings or metal objects, or other materials which would not be carried by the sewer stream or anything which may obstruct the flow of sewage in the sewer or any object which would cause clogging of a sewage pump or a sewage sludge pump;
- Any garbage which has not been first shredded so that each particle is not more than three eighths of an inch in any dimension or any garbage containing broken glass
- Any solid or semisolid material such as garbage, trimmings, cuttings, offal, or other waste produced in the processing of meats, fruits, vegetables, foodstuffs or similar materials except garbage produced which meets the requirements of Chapters 15.04 through 15.28 and the rules, regulations, and charges governing water and sewer service;
- Any volatile liquids or substances which can produce toxic or flammable atmospheres in the sewer;
- Any compounds which may produce strong odors in the sewer or sewage treatment plant;
- Any storm water or runoff from any roof, yard, driveway, or street;
- Any materials which would cause damage to any part of the sewer system or abnormal supplied generation or abnormal maintenance or operation costs of any part of the sewer system or which may cause any part of the sewer system to become a nuisance or a menace to public health or a hazard to workers or which would cause objectionable conditions at the final point of disposal of the sewage;
- Any liquid having a temperature in excess of 120 degrees Fahrenheit (°F);
- Unpolluted water from refrigeration systems, air conditioning systems, industrial cooling systems, swimming pools, or other unpolluted water from any origin except as authorized by the general manager; or
- Any radioactive waste which constitutes or may constitute a public health hazard or endanger workmen charged with the maintenance of public sewers.

Chapter 15.20 also includes regulations regarding building sewer lines across another lot; maintenance; existing sewers; backflow prevention; backflow noncompliance; septic tank abandonment; dumping contents of septic tanks or cesspools; opening manholes; damaging sewers; disposal of uncontaminated water; cellar and shower drainage; maintenance of facilities; and inspections. Finally, Chapters 15.24 and 15.28 include regulations for installations and inspections, respectively.

## **Solid Waste**

### **Long Beach Municipal Code – Chapter 8.60**

Chapter 8.60 of the LBMC addresses solid waste, recycling, and litter prevention in the City. Sections 8.60.025 and 8.60.020 establish standards and guidelines regarding refuse and recycling receptacles for removing and conveying waste, Section 8.60.080 addresses waste requiring special handling (e.g., material likely to become airborne), and Section 8.60.080 discusses permitting surrounding refuse transportation. Chapter 18.67 discusses regulations surrounding the City’s construction and demolition recycling program. Section 18.67.020 applies to all construction projects issued a building permit after January 1, 2008, and requires that each project having a valuation greater than \$75,000 to divert at least 60 percent of all project-related construction and demolition material.

### **Construction & Demolition Debris Recycling (C&D) Program**

In response to State-mandated waste reduction goals, and as part of the City’s commitment to sustainable development, the City adopted an ordinance that requires certain demolition and/or construction projects to divert at least 65 percent of waste either through recycling, salvage, or deconstruction. The C&D Program—which took effect on November 5, 2007—aims to encourage permit applicants to recycle all C&D materials through a refundable performance deposit. The C&D program also encourages the use of green building techniques in new construction and promotes reuse or salvaging of recyclable materials in demolition, deconstruction, and construction projects.

### **Waste Management Plan (WMP)**

In accordance with the C&D program, a Waste Management Plan (WMP) must be completed and approved prior to permits being issued. The WMP details how the project would meet the requirement to divert 60 percent of C&D waste either through recycling, salvage, or deconstruction. At the conclusion of the project, a final report detailing the amount of reuse, recycling, and disposal actually generated from the project must be submitted and approved prior to the Applicant receiving refund of the performance deposit. Projects that do not meet the 60 percent requirement may receive a partial refund in proportion to actual diversion.<sup>38</sup>

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38 California Waste Services (CWs), “City of Long Beach,” <https://www.californiawasteservices.com/es/long-beach.html>, accessed May 2021.

## 4. ENVIRONMENTAL IMPACTS

### *Thresholds of Significance*

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to utilities and service systems if it would:

- Threshold IV. UTI-1:** 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?
- Threshold IV. UTI-2:** Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
- Threshold IV. UTI-3:** Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- Threshold IV. UTI-4:** Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

## 5. METHODOLOGY

### Methodologies for Evaluating Significance

The analysis provided below is based on proposed Project's forecasted utility usage as compared to the existing capacity of utility facilities that serve the Project Site.

#### *Water supply*

The analysis of the Project's impacts relative to water supply is based on information contained in the LBWD 2020 Public Draft UWMP.<sup>39</sup> The 2020 UWMP summarizes future water demands over a 30-year period, the availability of future water supplies necessary to meet demands, actions that need to be taken if water supplies reduce more than 50 percent, and current and future programs that would encourage conservation of water supplies. According to the 2020 UWMP, LBWD water supplies are expected to be consistent for the future use. However, the City has continued to provide water conservation programs and other efforts to reduce the demand on the water supply and meet the urban water use reduction targets.

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39 Long Beach Water Department, 2020 Urban Water Management Program (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

The estimated water demand for the proposed Project is estimated using demand factors for domestic and irrigation demands in the UWMP and analyzed relative to the available water supply during average/normal years and dry years projected in the UWMP. Existing off-site water infrastructure within the vicinity of the Project Site is also examined to determine whether connections to such infrastructure would create proposed Project impacts. Impacts to the water supply are considered potentially significant if the Project would not have sufficient water supplies available from existing entitlements and resources.

### ***Wastewater***

The analysis of proposed Project impacts on wastewater and treatment capacity is based on the requirements and guidelines presented by the Regional Water Quality Control Board (RWQCB). The increase in wastewater generation is expected to occur with the implementation of the proposed Project was estimated using wastewater generation factors from the LACSD. Impacts to wastewater infrastructure would be considered significant if the Project would result in sewer line or treatment plant system deficiencies requiring new or expanded facilities.

### ***Solid Waste***

The proposed Project would have a significant impact on solid waste if the landfill that serves the proposed Project does not have sufficient capacity or if the proposed Project fails to comply with federal, State, or local statutes and regulations. Analysis of solid waste generation includes disposal of inert demolition and construction debris during the Project's construction phase and solid waste during the operation.

### ***Stormwater Conveyance***

The proposed Project would have a significant impact on stormwater conveyance if additional storm water drainage facilities or expansion of existing facilities would be required. A Preliminary Drainage Study (see **Appendix IV.I-1**) was prepared for the Project to assess and calculate stormwater collection on-site and to determine if the construction of new storm water drains would be necessary for the completion of the Project. Additional discussion of this study can be found in **Section IV.I: Hydrology and Water Quality**.

### ***Energy***

To evaluate potential impacts relative to energy, this analysis evaluates whether adequate energy systems within the Project Site would be available to accommodate the proposed residential development. Electricity and natural gas demand analysis is based on information obtained from the South Coast Air Quality Management District (SCAQMD), CalEEMod developed by the California Air Pollution Control Officers Association (CAPCOA), California Air Resources Board (CARB) Emission Factors' (EMFAC) model 2017 model. Daily trip generation calculations produced by CalEEMod are found in **Appendix IV.G.1** and supporting calculations using the EMFAC 2017 are found in **Appendix IV.E.1**.

## 6. PROJECT IMPACTS

**Threshold IV.UTI-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water draining, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?**

### ***Construction***

#### **Water Supply**

A short-term demand for water would occur during Project construction, primarily for the use of dust control, concrete mixing, cleaning of equipment, and other related construction activities. The amount of water used during construction would vary depending on weather, soil, and site-specific operations, but would not amount to a substantial quantity. Water would be provided through a construction-metered connection from existing potable lines within the vicinity of the Project Site. Water tankers would also provide water for dust control as needed. As shown in **Table IV.O-1**, existing water supplies for the City were calculated at 64,898 AF for the year 2020. According to the 2020 UWMP, total urban retail sales based on 2019 billing data consisted of 48,212 AF.<sup>40</sup> The difference in existing supply and total urban retail sales amounts to 16,686 AF. In addition to this, demand for water is projected to decrease with the use of conservation methods such as recycling water. As such, an adequate supply of water would be available during construction considering the temporary status and the minimal amount of water that would be used during this time. Construction impacts to the relocation or construction of new or expanded water facilities would be less than significant.

#### **Wastewater**

Project construction activities would result in a temporary increase in wastewater generation as a result of construction work on-site. Generation of wastewater would occur over the course of the construction period of about three and a half to four years but would be minimal, limited to wastewater generated as stormwater for dust control and human waste mostly confined to portable sanitation facilities. Construction contractors working on-site would be provided portable, on-site sanitation facilities that would be serviced at approved disposal facilities and/or treatment plants. Portable on-site sanitation facilities would be cleaned, as appropriate, and the wastewater would be transported to the JWPCP for treatment.

The LBWD operates and maintains over 700 miles of sanitary sewer lines that are capable of collecting and delivering over 40 million gallons of wastewater per day to the Sanitation District of Los Angeles County

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<sup>40</sup> City of Long Beach, 2020 Urban Water Management Plan (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

for treatment.<sup>41</sup> The JWPCP, part of the LACSD, currently has a capacity of 400 MGD and serves over 4.8 million residents, businesses and industries within its service area.<sup>42</sup> As of 2019, the JWPCP treated an average of 260 MGD. After receiving primary and secondary treatment, the wastewater is transported to the Long Beach Water Reclamation Plant (LBWRP).<sup>43</sup> Here, the water is treated once more and classified as “disinfected tertiary recycled water” and can be used for irrigation of parks, golf courses, cemeteries, recharge for groundwater, and street sweeping. The LBWRP treated an estimated 12 MGD in 2020 with a capacity of 25 MGD.<sup>44</sup> With the addition of construction wastewater that would be generated from the proposed Project being minimal and temporary, the proposed Project would have a less than significant impact on wastewater relocation or construction of new or expanded wastewater facilities during construction.

### **Solid Waste**

Construction of the proposed Project is anticipated to occur over a period of approximately three and a half to four years. Waste generated during the construction period would result in an incremental and intermittent increase in solid waste disposal. As part of the California Green Building Standards Code and the City’s requirements for sustainable development, at least 65 percent of waste created by construction and or demolition projects must be diverted from the waste stream as recycling, salvage, or deconstruction.<sup>45</sup> Site preparation activities needed to develop the Project Site would require the removal of the existing water treatment infrastructure, removal of existing vegetation, and other related construction activities mentioned in **Section II: Project Description**. Site remediation activities described in **Section II** would require removal of soil from the Project Site. Remediation would also include capping the area of the proposed park with an subsurface, engineered barrier system. All construction materials are expected to create typical construction debris such as wood, paper, glass, plastic, metals, cardboard, and green wastes.

The SERRF where the proposed Project’s solid waste would be diverted to, contains a capacity of 2,240 tons per day.<sup>46</sup> This facility would sort and process solid waste materials that are able to be recycle or converted into energy. Materials that would not be able to be processed here would be taken to landfills

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41 Long Beach Water, Sewer, <https://www.lbwater.org/customer-services/sewer/#:~:text=Long%20Beach%20Water%20operates%20and%20maintains%20over%20700,by%20the%20Sanitation%20Districts%20of%20Los%20Angeles%20County>, accessed May 2021.

42 Long Beach Water, Joint Water Pollution Control Plant, <https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/default.asp>, accessed May 2021.

43 Long Beach Water, Reclaimed/Recycled Water, <https://www.lbwater.org/water-sources/reclaimed-recycled-water/>, accessed May 2021.

44 Long Beach Water Department, 2020 Urban Water Management Plan (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

45 LBMC, Ch. 18, 18.67.020 - Threshold for covered projects, accessed May 2021.

46 SWIS Facility/Site Activity Details, Southeast Resource Recovery Facility, <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3070?siteID=1423>, accessed May 2021.

in Orange, San Bernardino and Riverside counties. In accordance with the C&D program, a WMP must be completed and approved by the Long Beach Development Services Department prior to permits being issued to the proposed Project. The WMP explains how the proposed Project would meet the requirement of 65 percent of C&D waste either through recycling, salvage, or deconstruction. With the approval of this plan, the Project would meet the requirements of the City for waste diversion and would not significantly impact on relocation or construction of new or expanded solid waste facilities during construction.

### **Storm Water**

During the construction of the proposed Project, a Construction General Permit would be required under the National Pollutant Discharge Elimination System (NPDES) since more than an acre of soil would be disturbed. This requires the proposed Project to create a Storm Water Pollution Prevention Plan (SWPPP) to implement BMPs during construction to minimize the discharge or pollutants in stormwater runoff as well as control erosion, sediment, non-stormwater, and materials management. Stormwater management is discussed at length within **Section IV.I**. With these requirements, impacts to stormwater relocation or construction of new or expanded stormwater facilities during construction would be less than significant.

### **Electricity**

During construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control, and on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. A total of approximately 4,847 kilowatt-hours (kWh) of electricity would be needed for the construction phases of the proposed Project (see **Appendix IV.E.1** for calculations). The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Additionally, Title 24 requirements would apply to construction lighting if duration were to exceed 120 days, which includes limits on the wattage allowed per specified area for energy conservation. Due to the relatively short duration of the total construction process, and the fact that the extent of electricity consumption is inherent to construction projects of this size and nature, electricity consumption impacts would not be considered excessive or substantial with respect to regional supplies. The Project would have less than significant impacts on relocation or construction of new or expanded electricity facilities during construction.

### **Natural Gas**

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would likely not be needed to support

construction activities; thus, there would be little to no demand generated by construction. No impacts would occur.

### **Telecommunications**

Construction activities would not significantly increase local telecommunications' usage as construction workers typically lives within the region or locally and would be serviced by existing telecommunications facilities. Because of this, current infrastructure supporting telecommunications for the City would not require expansion or additions due during construction duration of the proposed Project. Telecommunications facilities would not be impacted during the construction phases of the proposed Project.

### ***Operation***

#### **Water Supply**

According to the 2020 UWMP, the LBWD projects that supplies including both potable and recycled water would be sufficient to meet all demand through the year 2050 during a single dry year and multiple dry years.<sup>47</sup> The calculations used to estimate water supply for the City included conservative estimates during dry years, even though previous data has shown that through community effort and public awareness water usage during this time is reduced. During normal year, single dry year, and multiple dry year conditions, water supply surpluses were found ranging from 30,788 AF to 36,182 AF based on potable and recycled water demand projections and historical water demand decreases due to voluntary and mandatory water restrictions. Voluntary restrictions have been implemented by residents with the efforts of retail suppliers who provide public education and outreach to encourage water reduction where possible. Also, mandatory restrictions like the City's adopted water waste prevention mandates enforce "prohibited uses of water" such as excess use, excessive runoff from irrigation, or operating water systems for prolonged periods of time. With the City's reduction in per capita water use through conservation and recycling of water supplies, the demand for water within the City has been reduced. This has led to an increasing surplus of water supplies forecasted over the next 30 years.

Water generated by the proposed Project was analyzed using demand factors provided by the 2020 UWMP. Estimated water demand for the Project Site would be approximately 89.50 AFY or about 79,900.5 gallons of water per day which would equate to 353.5 gallons per day per unit. As shown in **Table IV.O-2: Estimated Water Demand**, the proposed Project would constitute around an 0.19 percent increase in the City's water usage, which was 45,794 AFY in 2020.

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47 City of Long Beach, 2020 Urban Water Management Plan (*Public Draft*), <https://lbwater.org/wp-content/uploads/2019/09/LBWD-2015-UWMP-FINAL-Board-Adopted-3.pdf>, accessed April 2021.

**Table IV.O-2**  
**Estimated Water Usage Based on 2020 Demand**

Land Use	Units	Generation Rate (AFY)	Total (AFY)
Single-Family	226	0.39	89.50

*Notes: 1 AFY = 892 gallons per day (gpd)*

*Generation Rate (18,136 AF/45,794 AF = 0.39AFY)*

*Project Rate (226\*0.39 = 89.50 AFY per unit)*

Looking at the City's forecasted surplus for the year 2025, including normal year, single dry year, and multiple dry years, the surplus was calculated at 30,788 AFY. The Project demand of 89.50 AFY represents 0.29 percent of the City's surplus water supply during the year of 2025 for all hydrology. With a surplus of 30,788 AF projected for the year before Project operation, there would be sufficient supplies for operation of the proposed Project.

In addition to this, the Project would include numerous water supply efficiency features and be required to adhere to strict Leadership in Energy and Environmental Design (LEED) requirements during operation of the proposed Project. The City requires certain types of development to meet LEED certification standards at a minimum as outlined in the LBMC.<sup>48</sup> The green building standards for public and private development outlined by the municipal codes instructs development to be designed, built, renovated, operated, or reused in a resource-efficient manner. In regard to water usage, LEED requires all newly constructed projects to reduce aggregate water consumption by 20 percent from the baselines shown in **Table IV.O-3: Baseline Water Consumption of Fixtures and Fittings.**<sup>49</sup> Additionally, all newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling must be WaterSense labeled. The WaterSense label is set forth by the EPA for products that meet strict requirements for water efficiency. Outdoor water use must also be reduced by at least 30 percent from the calculated baseline for the Site's peak watering month. These reductions can be achieved through specific plant species, such as drought tolerant plants and irrigation system efficiency. With these requirements in place, the proposed Project would use water efficiently. The projected surplus of water supplies within the City coupled with the efficiency requirements of the Project design would reduce impacts to the water supply to less than significant.

48 LBMC, Ch. 21, Section 21.45.400 – Green building standards for public and private development.

49 U.S. Green Building Council (USGBC), LEED v4 for Building Design and Construction, July 2019, [https://www.usgbc.org/sites/default/files/LEED%20v4%20BDC\\_07.25.19\\_current.pdf](https://www.usgbc.org/sites/default/files/LEED%20v4%20BDC_07.25.19_current.pdf), accessed May 2021.

**Table IV.O-3**  
**LEED Baseline Water Consumption of Fixtures and Fittings**

Fixture or Fitting	Baseline (IP units)	Baseline (SI units)
Toilet	1.6 gpf	6 lpf
Urinal	1.0 gpf	3 lpf
Public restroom faucet	0.5 gpm at 60 psi	1.9 lpm at 415 kPa
Private restroom faucet	2.2 gpm at 60 psi	8.3 lpm at 415 kPa
Kitchen faucet	2.2 gpm at 60 psi	8.3 lpm at 415 kPa
Showerhead	2.5 gpm at 80 psi per shower stall	9.5 lpm at 550 kPa per shower stall

*Notes: lpf = liters per flush, lpm = liters per minute, kPa = kilopascals, gpf = gallons per flush, gpm = gallons per minute, psi = pounds per square inch*

### **Wastewater**

The proposed Project would result in the net increase of 226 single-family residences. **Table IV.O-4: Estimated Wastewater Generation** shows the estimated wastewater generated by the proposed Project using information from the 2020 UWTP.

**Table IV.O-4**  
**Estimated Wastewater Generation**

Land Use	Units	Generation Rate (gallons/day/unit)	Total (gallons/day)
Single-Family	226 dwelling units	260*	58,760

*Notes: 1 AFY = 892 gallons per day (gpd)*

*\*Source: LACSD Average Wastewater Generation Factors. Table 1, Loadings for Each Class of Land Use. Accessed at <http://www.lacsd.org/civica/filebank/blobdload.asp?BlobID=3531>*

The JWPCP, part of the LACSD would serve the Project Site. This facility currently has a capacity of 400 MGD and currently treats an average 260 MGD in a service area of over 4.8 million residents, businesses and industries. The net increase in wastewater generated by the proposed Project would be 58,760 gallons per day or approximately 0.059 MGD. The proposed Project's wastewater would represent 0.02 percent of the anticipated available daily capacity of the JWPCP. Therefore, the estimated wastewater flow from the proposed Project would be within the existing capacity of the JWPCP. Furthermore, the LACSD regularly prepares an Integrated Regional Water Management Plan (IRWMP) to guide the development and management of its facilities over 20-year planning horizons based on forecasted growth. As the Project

is within the expected growth of the City of Long Beach, it is within the capacity planning already conducted by LACSD.<sup>50</sup>

The current Project Site is not supported by substantial wastewater pipeline and additional infrastructure would be needed on site to support the proposed development. Existing wastewater infrastructure in the vicinity of the Project Site lies to the east of the Site and includes a gravity main line owned and controlled by the Los Angeles County Sanitation District and a pressure main connected to the gravity main that is owned by LBWD.<sup>51</sup> The majority of pipelines provided by LBWD range in size from 8-inch in diameter to 48-inches, with smaller pipelines found near lift stations or at the top of collection systems. Additionally, the majority of City sewer infrastructure consists of mainly vitrified clay pipes and some concrete pipes and polyvinyl chloride (PVC). The City has a majority of existing pipes that are around 61-80 years old with a little less than one third being 81-110 years old. All LBWD owned pipelines connect to LACSD pipes which then run through either the JWPCP or the LBWRP.

The LBWD owned gravity main near the Site, located immediately southwest of an existing pump station on the opposite of the I-405 freeway is less than 8-inches in size. Any new and replaced utilities installed underground would be connected to existing municipal and regional utility providers and the wider utility infrastructure. Existing utilities near the Project Site would be inspected prior to connection considering the majority age of the existing pipelines in the City. Improvements to establish utility connections at and around the site would be implemented as part of the construction of the Project and would not result in distinct environmental impacts. The proposed Project would represent an additional 0.06 percent in generated wastewater and is within the population growth forecasts used by LACSD in facility planning. As such, additional wastewater infrastructure would not be needed and the proposed Project would have a less than significant impact to the overall amount of wastewater generated by the City.

### **Solid Waste**

In 2019, the City estimated an annual per capita resident landfill disposal rate of 4.3 pounds per day (ppd).<sup>52</sup> As noted before, the SERRF would serve the Project's solid waste generation. This facility has a maximum capacity of 2,240 tons per day.<sup>53</sup> The proposed Project would add 226 new single-family

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50 <https://www.lacsd.org/documents/wastewater-publications-reports/integrated-regional-water-management-plans>

51 Long Beach Water Department, Sewer System Management Plan, <https://lbwater.org/wp-content/uploads/2019/10/LBWD-SSMP-2019-2024-final-Combined-files-incl-attchmnts.pdf>, accessed May 2021.

52 CalRecycle, Disposal Rate Calculator, <https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DisposalRateCalculator>, accessed May 2021.

53 SWIS Facility/Site Activity Details, Southeast Resource Recovery Facility, <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3070?siteID=1423>, accessed May 2021.

residences, which would result in an estimated 624 residents.<sup>54</sup> The proposed Project would result in increased generation of solid waste and increased demand for solid waste services. Total solid waste generated by the Project during operation is estimated at approximately 2,683 ppd as shown in **Table IV.O-5: Estimated Solid Waste Generation**.

The approximately 1.3 tons per day of solid waste generated by the proposed Project would require approximately 0.06 percent of the currently available daily capacity at the SERRF. The total amount of solid waste produced by the proposed Project would equate to an estimated 474.5 tons per year, 65 percent of which must be diverted or 308.4 tons per year. This additional amount generated by the proposed Project would be easily accommodated by SERRF.

**Table IV.O-5  
Estimated Solid Waste Generation**

Land Use	Estimated Population	Solid Waste Generation Rate (ppd)	Total (ppd)
Single-Family	624 residents	4.3	2,683.2
<i>Total for Proposed Project (ppd)</i>			2,683.2
<i>Total Net Increase in Solid Waste (tons/day)</i>			1.3

*Notes: 1 ton/year = 5.48 ppd*

Additionally, efficiency requirements of the City and LEED at the certified level for residential Building Construction and Design (BC+D) would be adhered to during operation of the proposed Project. In order to reduce waste generated by building occupants, LEED requires dedicated areas that are accessible to waste haulers as well as occupants, for collection and storage of recyclable materials. Having accessible recycling facilities on the property would encourage more solid waste to be recycled. LEED certification also includes the option to conduct a life-cycle assessment of the Project's solid waste generation and reduce that by a minimum of 10 percent in at least three of the following categories:

- global warming potential (greenhouse gases), in kg CO<sub>2</sub>e;
- depletion of the stratospheric ozone layer, in kg CFC-11;
- acidification of land and water sources, in moles H<sup>+</sup> or kg SO<sub>2</sub>;
- eutrophication, in kg nitrogen or kg phosphate;

<sup>54</sup> Based on average household size reported by US Census Bureau. See page 59 of the Initial Study, provided In Appendix I of this DEIR.

- formation of tropospheric ozone, in kg NO<sub>x</sub>, kg O<sub>3</sub> eq, or kg ethene; and
- depletion of nonrenewable energy resources, in MJ

With these LEED requirements would result in the proposed Project having a less than significant impact on solid waste.

### **Stormwater**

Operation of the proposed Project would introduce sources of potential stormwater pollutants that are typical of residential uses (e.g., cleaning solvents, pesticides for landscaping, and petroleum products associated with circulation areas). Stormwater runoff from precipitation events could potentially carry urban pollutants into municipal storm drains. A RWQCB compliant SUSMP would be implemented on site in accordance with the low-impact development (LID) program which was developed as part of the municipal stormwater program at the City. Further, applicable postconstruction BMPs have been incorporated into the design of the Project.

The Conceptual LID BMP Calculations document (see **Appendix IV.I.2**) was prepared to support a feasibility analysis to determine the most appropriate BMP for the first flush or initial surface runoff.<sup>55</sup> Calculations were performed for infiltration, capture and use, and/or biofiltration BMPs. Infiltration along with Capture & Use was deemed infeasible due to potential soil contamination from the historic use of the Site by oil companies. Biofiltration planters (flow through planters) were chosen for management of the residential portion of the Project's water quality design volume. An approximately 10-foot deep portion of the entry drive at Wardlow Road would allow stormwater to flow into the right of way of Wardlow Road and enter the public storm drain system through a curbside drain east of the Project. Calculations show biofiltration basins used to capture runoff would be sufficient in reducing the contamination from the soil into the groundwater (see **Appendix IV.I.2**). The Project area would experience minimal change in peak discharge with proposed Project buildout and no negative impacts to downstream receiving waters would occur with the implementation of biofiltration.

Additionally, the proposed Project would comply with the Long Beach LID BMP Design Manual, which requires BMPs to be implemented and includes biofiltration basins, such as those stated in the Conceptual LID BMP document. Specifically, a biofiltration system would be installed that use landscaped basins in which stormwater is collected and flows through vegetation, gravel and other bioretention media to filter out pollutants. The proposed Project would comply with NPDES guidelines to reduce operation impacts related to surface and groundwater quality. Based on the findings of the Conceptual LID BMP Calculation

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55 KHR Associates, Conceptual LID BMP Calculations, April 22, 2020, Appendix IV.I.2.

and compliance with existing policies and regulation the proposed Project would have a less than significant impact to local surface and groundwater quality.

### **Electricity**

As shown in **Table IV.O-6: Summary of Electricity Use During Operation**, buildout of the proposed Project would result in a projected increase in the on-site demand for electricity, totaling 1,533,221 kWh (1.5 GWh) per year. Southern California Edison (SCE) estimates that electricity consumption within its planning area would be approximately 125,000 GWh annually by 2027, when the proposed Project would be fully built out.<sup>56</sup> The proposed Project would account for less than 0.01 percent of the 2027 annual consumption in SCE's planning area.<sup>57</sup>

In addition to complying with Title 24 and California Green Building Standards Code (CALGreen), the proposed Project would provide for indirect energy savings, such as permitting individual solar panels to be applied to the proposed residential uses. This would be installed in compliance with Title 24 Section 110.10, which includes mandatory regulations for solar-ready buildings and would not preclude the use of alternate energy sources.

**Table IV.O-6  
Summary of Electricity Use During Operation**

<b>Source</b>	<b>Units</b>	<b>Quantity</b>
<b><i>Electricity</i></b>		
Condo/Townhouses	kWh/yr	627,950
Single-Family Residences	kWh/yr	594,973
Parking Areas	kWh/yr	60,069
Water	kWh/yr	250,229
<i>Electricity Total</i>	<i>kWh/yr</i>	<i>1,533,221</i>

Consistent with Section 21.45.400 of the LBMC, the proposed Project would also be required to meet the LEED program at the certified level for residential BC+D and comply with the City's green building program. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water and other resources more efficiently; and reducing the overall impact to the environment. Therefore, operation of the proposed Project would not result in wasteful,

<sup>56</sup> CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, <https://efiling.energy.ca.gov/getdocument.aspx?tn=223244>. Accessed April 2021.

<sup>57</sup> 1.5 GWh/ 125,000 GWh = 0.000012

inefficient or unnecessary consumption of electricity and impacts would be less than significant. For additional discussion of Energy impacts, see **Section IV.E** of this DEIR.

### **Natural Gas**

As shown in **Table IV.O-7: Summary of Natural Gas Use During Operation**, with compliance with Title 24 standards and applicable CALGreen requirements, buildout of the proposed Project is projected to generate an on-site demand for natural gas totaling 516,770 kBTU per year or 11,933 cf (0.01 MMcf) per day.<sup>58</sup>

**Table IV.O-7  
Summary of Natural Gas Use During Operation**

Source	Units	Quantity
<b><i>Natural Gas</i></b>		
Condo/Townhouses	kBTU/yr	2,483,650
Single-Family Residences	kBTU/yr	2,033,120
<b><i>Natural Gas Total</i></b>	<b><i>kBTU/yr</i></b>	<b><i>4,516,770</i></b>

Based on the 2020 California Gas Report, LBER is expected to supply 26.3 MMcf of natural gas per day in 2027, when the proposed Project would be fully developed.<sup>59</sup> The proposed Project would account for approximately 0.03 percent of the 2027 daily forecasted consumption in LBER's planning area. As previously mentioned, LEED certification is required within the City and measures such as submetering would be implemented to detect any sudden fluctuations of natural gas use. New appliances using natural gas would be efficient and reduce unnecessary and wasteful consumption of natural gas during operation. Therefore, operation of the proposed Project would not result in wasteful, inefficient or unnecessary consumption of natural gas and impacts would be less than significant. For additional discussion of Energy impacts, see **Section IV.E** of this DEIR.

### **Telecommunications**

The City owns approximately 60 miles of fiber optic cable throughout the City. This fiber optic network connects the Long Beach Airport, the Fire Headquarters, and Police Field Support within the City. The City intends on expanding the capacity of existing facilities and adding more fiber optic facilities to address the growing demand for faster cable speeds, greater bandwidths, more reliable data transmission, and to

<sup>58</sup> The conversion of kBTU to cubic feet uses the factor of 1 cf to 1.037 kBTU. Based on 365 days per year.

<sup>59</sup> California Public Utilities Commission, 2020 California Gas Report, [https://www.socalgas.com/sites/default/files/2020-10/2020\\_California\\_Gas\\_Report\\_Joint\\_Utility\\_Biennial\\_Comprehensive\\_Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf). Accessed April 2021.

accommodate more flexibility for the future.<sup>60</sup> Spectrum Communications, Frontier Communications, and AT&T U-verse provide telecommunication and internet services to the City. The proposed Project could result in the need for additional telecommunications facilities.

It is expected that Spectrum, Frontier, and AT&T would continue to expand infrastructure capacity if necessary to meet demand increases within their service area. The Project would be served by the existing telecommunications infrastructure surrounding the Project Site and would be anticipated to incorporate site-specific infrastructure improvements, as appropriate. Therefore, the Project would result in less than significant impacts to the telecommunication infrastructure in the surrounding area.

**Threshold IV.UTI-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

### ***Construction***

As discussed previously, short-term water usage would occur during the construction phases of the Project, mainly to control dust, mix concrete, clean equipment, and other related construction activities. These activities would occur incrementally throughout the build-out of the proposed Project and are temporary in nature. The amount of water used during construction would vary depending on the conditions of the soil, weather, size of the area being worked, and site-specific operations, but is not expected to be substantial. As shown previously in **Table IV.O-1**, existing and future water supplies for the City were calculated at 64,898 AF for the year 2020. The 2020 UWMP showed water demand for all sectors in the City at a total of 45,794 AFY for the year 2020.<sup>61</sup> The City has had a history of successful operation of the Central Basin, which provides groundwater to the City. Additional rights to pump could become available if needed, but with the current demand and projected future demand it does not seem necessary. Imported water supplies are also expected to meet the demand of the City in future years as demand fluctuates. As such, water supplies in the City would be able to accommodate the temporary and incremental use during the construction of the proposed Project.

### ***Operation***

As previously discussed, **Table IV.O-2** shows the estimated water demand for the operation of the proposed Project at 89.50 AFY. It was also stated that surplus water would be available over the projected 30-year period, increasing over time due to conservation of supplies and improved reclamation efforts.

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60 City of Long Beach. Recirculated Draft EIR- General Plan Land Use and Urban Design Elements Project. June 2019. Accessed April 30, 2021.

61 City of Long Beach, 2020 Urban Water Management Plan (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

The water supply forecast for normal, single dry, and multiple dry years including conservative estimates, found surpluses ranging from 30,788 AF to 36,182 AF. Also, the proposed Project would be required to incorporate LEED certified designs such as water efficient faucets and fixtures to the interior of the homes and facilities. Outdoor water use would also be LEED certified and require reduced irrigation for landscaping by at least 30 percent from the calculated baseline for the Site's peak watering month. As such, an adequate supply of water would be available during proposed Project operation. Impacts to City water supply during the operation of the proposed Project would not be significant.

**Threshold IV.UTI-3: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

### ***Construction***

As discussed previously, Project construction activities would result in a temporary increase in wastewater generation as a result of construction workers on-site. Portable on-site sanitation facilities would be cleaned, as appropriate, and the wastewater would then be transported to the JWPCP for treatment. The current capacity of the facility is 400 million gallons of wastewater per day and current treatment is estimated at 260 MGD according to 2019 data. The Project Site would also be served by the LBWRP which has a capacity of 25 MGD and treated an estimated 12 MGD in 2020. The total amount of construction wastewater that would be generated by the Project would be negligible when compared to the average daily treatment of 12 MGD. Therefore, impacts related to wastewater generation as a result of construction of the proposed Project would be less than significant.

### ***Operation***

As discussed previously, the Project would generate approximately 58,760 gallons per day or approximately 0.059 MGD of wastewater. The JWPCP has a capacity of 400 MGD with an estimated daily treatment of 260 MGD. The Project would constitute 0.02 percent of the anticipated available daily capacity of the facility. As such, an adequate amount of treatment capacity would be available for the Project during operation. Therefore, the Project would not significantly affect the treatment capacity of the JWPCP and no significant impacts would occur.

**Threshold IV.UTI-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

### ***Construction***

The Project would comply with the California Green Building Standards Code and the City's requirements for sustainable development including the requirement for 65 percent reduction in waste generated and recycling requirements. This would include recycling a majority of materials through the SERRF. Any materials that cannot be processed at the SERRF would be sent to a landfill in either Orange, San Bernardino, or Riverside counties. As such, the Project would promote material reduction and recycling consistent with applicable federal, State, and local guidelines related to solid waste. Therefore, construction of the proposed Project would not conflict with applicable statutes and regulations regarding solid waste. Impacts associated with construction solid waste policies would be less than significant.

### ***Operation***

As previously discussed, the proposed Project would generate approximately 2,683 ppd or 1.3 tons per day of solid waste. The daily capacity at the SERRF facility is approximately 2,240 tons per day, so the Project would account for an estimated 0.06 percent of the daily maximum. Additionally, the Project would be required to divert 65 percent of annual solid waste generated away from the landfill. Based on the estimated solid waste generated per day by the Project, approximately 474.5 tons per day. An estimated 65 percent of the solid waste generated would equate to 308.42 tons per day. This would be feasible to accommodate through the SERRF facility, constituting approximately 13.8 percent of the capacity. It is therefore reasonable that the Project would be able to meet the City's current and future recycling goals and meet the City's waste management ordinance to divert at least 65 percent of potential waste disposal. Additionally, in accordance with the C&D program, a Waste Management Plan (WMP) must be completed and approved prior to permits being issued to the Project. The WMP explains how the Project would meet the requirement of 65 percent of C&D waste either through recycling, salvage, or deconstruction. With the approval of this plan, the Project would meet the requirements of the City for solid waste diversion. Compliance with this ordinance and the feasibility of staying within the capacity of the City's SERRF facility, a majority of the Project's solid waste would be reduced. As such, the proposed Project would not create a significant impact on solid waste generation.

## 7. CUMULATIVE IMPACTS

### Water

As previously discussed in **Section IV.I**, operation of the proposed Project would constitute around an 0.19 percent increase in the City's water usage, which was 45,794 AFY in 2020. This is within the existing water supply at the City. The proposed Project would implement water reduction measures in accordance with LEED requirements to ensure efficient use of water on site during operation. Additionally, according to the 2020 UWMP, the LBWD projects that supplies including both potable and recycled water would be sufficient to meet all demand through the year 2050 during normal, single dry year, and multiple dry years.<sup>62</sup> The calculations used to estimate water supply for the City included conservative estimates during dry years, even though previous data has shown that through community effort and public awareness water usage during this time is reduced. During normal year, single dry year, and multiple dry year conditions, water supply surpluses were found ranging from 30,788 AF to 36,182 AF. With the City's reduction in per capita water use through voluntary and mandatory conservation and recycling of water supplies, the demand for water within the City has been reduced. This reduction has led to an increasing surplus of water supplies forecasted over the next 30 years. Cumulative Project impact to water supply would be less than significant.

### Wastewater

The proposed Project would be serviced by JWPCP, a wastewater treatment facility that is part of the LACSD. This facility currently has a capacity of 400 MGD and serves over 4.8 million residents, businesses and industries within its service area. The net increase in wastewater generated by the proposed Project would be 58,760 gallons per day or approximately 0.059 MGD. The proposed Project's wastewater would represent 0.02 percent of the anticipated available daily capacity of the JWPCP. As previously mentioned, the increase in population at the proposed Project is consistent with the population forecasts produced by Southern California Association of Governments (SCAG) which is used for long-range planning documents. Therefore, the estimated wastewater treatment capacity is anticipated to be able to support foreseeable growth within the service area of JWPCP. Cumulative Project impact to wastewater treatment capacity would be less than significant.

### Stormwater

Operation of the proposed Project would incorporate postconstruction BMPs into the design of the proposed Project. A Conceptual LID BMP Calculations document was prepared to determine the most

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62 City of Long Beach, 2020 Urban Water Management Plan (*Public Draft*), [https://www.lbwater.org/wp-content/uploads/2021/05/LBWD\\_UWMP2020\\_PublicReviewDraft.pdf](https://www.lbwater.org/wp-content/uploads/2021/05/LBWD_UWMP2020_PublicReviewDraft.pdf), accessed July 2021.

appropriate BMPs to be implemented on site including considerations for infiltration, capture and use, and/or biofiltration BMPs. Biofiltration planters (flow through planters) were chosen for management of the residential portion of the proposed Project's water quality design volume. With the implementation of stormwater BMP measures, calculations show capture runoff would be sufficient in reducing the contamination from the soil into the groundwater. Additionally, the Project area would experience minimal change in peak discharge with proposed Project buildout and no negative impacts to downstream receiving waters would occur with the implementation of biofiltration. With sufficient reduction in contamination from Project Site runoff and minimal change in peak discharge, the proposed Project would not significantly contribute to cumulative impacts in an additive sense. Cumulative stormwater impacts would be less than significant.

## Electricity

As discussed in **Section IV.E: Energy**, buildout of the proposed Project, related projects, and additional forecasted growth in SCE's service area would cumulatively increase the demand for electricity supplies and infrastructure capacity. A total of approximately 4,847 kWh of electricity is anticipated to be consumed during construction of the proposed Project. Due to the relatively short duration of the construction process, and the fact that the extent of electricity consumption is inherent to construction projects of this size and nature, electricity consumption impacts would not be considered excessive or substantial with respect to regional supplies. Moreover, SCE estimates that electricity consumption within its planning area will be approximately 125,000 GWh annually by 2027, when the proposed Project would be fully built out.<sup>63</sup> The proposed Project would account for less than 0.01 percent of the 2027 annual consumption in SCE's planning area.<sup>64</sup>

Additionally, the proposed Project is consistent with the population forecasts for the subregion as adopted by SCAG which has been utilized in future planning documents for the SCE service area. Additionally, Project operational activities would be within the demand forecast for the SCE service area. Although development of the proposed Project would result in the use of electricity resources during construction and operation, which could limit future availability, the use of such resources would be on a relatively small scale when compared to regional consumption and would be reduced through compliance with the latest CALGreen code requirements. Furthermore, as with the proposed Project, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate energy design features, as necessary during construction and operation. Therefore, the proposed Project's

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63 CEC, Demand Analysis Office, California Energy Demand 2018-2030 Revised Forecast, <https://efiling.energy.ca.gov/getdocument.aspx?tn=223244>. Accessed April 2021.

64  $1.5 \text{ GWh} / 125,000 \text{ GWh} = 0.000012$

contribution to cumulative impacts related to wasteful, inefficient, and unnecessary use of electricity would not be cumulatively considerable. Cumulative electricity impacts would be less than significant.

## Natural Gas

As discussed in **Section IV.E: Energy**, buildout of the proposed Project, related projects, and additional forecasted growth in SoCalGas service area would cumulatively increase the demand for natural gas supplies and infrastructure capacity. Based on the 2020 California Gas Report, LBER is expected to supply 26.3 MMcf of natural gas per day in 2027, when the Project would be fully built out.<sup>65</sup> The proposed Project would account for approximately 0.03 percent of the 2027 daily forecasted consumption in LBER's planning area. Natural gas would likely not be needed to support construction activities.

Although development of the proposed Project would result in the use of natural gas resources, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures rendering the proposed Project more energy efficient, consistent with growth expectations for the LBER service area. Furthermore, future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary. Therefore, the proposed Project's contribution to cumulative impacts related to wasteful, inefficient, and unnecessary use of natural gas would not be cumulatively considerable. Cumulative natural gas consumption impacts would be less than significant.

## Telecommunications

The City owns approximately 60 miles of fiber optic cable throughout the City. This fiber optic network connects the Long Beach Airport, the Fire Headquarters, and Police Field Support within the City. The City intends on expanding the capacity of existing facilities and adding more fiber optic facilities to address the growing demand for faster cable speeds, greater bandwidths, more reliable data transmission, and to accommodate more flexibility for the future.<sup>66</sup> With the planned expansion of capacity of existing facilities to address the growing demand in and around the City, and the fact the proposed Project is within the SCAG projection for future population growth in the area, the proposed Project's cumulative impact on telecommunications would be less than significant.

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65 California Public Utilities Commission, 2020 California Gas Report, [https://www.socalgas.com/sites/default/files/2020-10/2020\\_California\\_Gas\\_Report\\_Joint\\_Utility\\_Biennial\\_Comprehensive\\_Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf). Accessed April 2021.

66 City of Long Beach. Recirculated Draft EIR- General Plan Land Use and Urban Design Elements Project. June 2019. Accessed April 30, 2021.

## **8. MITIGATION MEASURES**

The proposed Project would have a less than significant impact on utilities and service system resources. Therefore, no mitigation measures would be required.

## **9. LEVEL OF SIGNIFICANCE AFTER MITIGATION**

The proposed Project would have a less than significant impact on utilities and service system resources. Therefore, no mitigation measures would be required.

## V. ALTERNATIVES

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### 1. INTRODUCTION

The identification and analysis of alternatives to a proposed project is a fundamental aspect of the environmental review process under CEQA. Public Resources Code Section 21002 states, in part: “it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects.” In addition, Public Resources Code Section 21002.1(a) states: “The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided.”

CEQA Guidelines Section 15126.6(a) provides the following guidance regarding an EIR’s discussion of alternatives:

*An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible.*

CEQA Guidelines Section 15126.6(b) emphasizes the selection of project alternatives should be based primarily on the ability to avoid or substantially lessen significant impacts attributable to a proposed project, “even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” CEQA Guidelines Section 15126.6(f) further directs that the range of alternatives be guided by a “rule of reason,” such that only those alternatives necessary to permit a reasoned choice are addressed. In selecting project alternatives for analysis, potential alternatives must be feasible. CEQA Guidelines Section 15126.6(f)(1) states:

*Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.*

Beyond these factors, CEQA Guidelines Section 15126.6(e) requires the analysis of a “no project” alternative and CEQA Guidelines Section 15126.6(f)(2) requires the evaluation of alternative location(s) for a proposed project, if feasible. Based on the alternatives analysis, CEQA Guidelines Section 15126.6(e)(2) requires an EIR to designate an environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, then the EIR must identify an environmentally superior alternative among the other alternatives. CEQA Guidelines Section 15126.6(d) states:

*The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project... If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.*

## 2. PROJECT OBJECTIVES

Reasonable alternatives are those that would attain most of the basic objectives of the Project. As described in **Section II**, the following objectives have been identified for the proposed Project:

Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines states that the project description shall contain “a statement of the objectives sought by the proposed project.” Section 15124(b) of the CEQA Guidelines further states that “the statement of objectives should include the underlying purpose of the project.”

The objectives of the Project are:

1. Clean up the existing hydrocarbon contamination on site, under an approved RAP by LARWQCB and under the supervision of the City’s Department of Health and Human Services.
2. Provide additional public park space in the Wrigley Heights Neighborhood.
3. Develop a range of attached and detached single-family with the Long Beach Residential development standards and LBMC to assist the City in meeting the goals for housing production identified in the Housing Element of the General Plan.
4. Provide economically viable new housing in the Wrigley Heights neighborhood that will meaningfully contribute to addressing the housing needs for the City of Long Beach and provide housing for residents working in the nearby employment centers.
5. Provide a range of recreational opportunities, including neighborhood parks, pedestrian trails, and bicycle trails segregated from vehicle traffic, which connect with supporting commercial, recreational, and other public facilities, to serve as an alternative to the automobile for surrounding residential neighborhoods and to meet the recreational needs of local residents.

6. Enhance the image of the community through visually attractive and high-quality development that is in scale, complements, and blends with the Wrigley Heights community and surrounding open space.
7. Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation, in compliance with LBMC and the Long Beach General Plan Land Use Element.

### **3. ALTERNATIVES CONSIDERED AND REJECTED AS INFEASIBLE**

The range of alternatives required within an EIR is governed by the “rule of reason,” under CEQA Guidelines, Section 15126.6(f), which requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider every conceivable alternative to a project. An EIR need not consider an alternative with an unlikely or speculative potential for implementation or an alternative that would result in effects that cannot be reasonably ascertained.

Under CEQA Guidelines Section 15126.6(c), an EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible and briefly explain the reasons underlying the lead agency’s determination. Pursuant to the CEQA Guidelines(c), the following factors may be used to eliminate alternatives from detailed consideration in an EIR: (i) the alternative’s failure to meet most of the basic project objectives; (ii) the alternative’s infeasibility; or (iii) the alternative’s inability to avoid significant environmental impacts.

#### ***Alternative Locations***

Alternative locations were rejected as infeasible. The Project Applicant has submitted a request to the City to approve development of the site that is under its ownership and control. In addition, the Project has been designed specifically for the location. Section 15126.6(f)(30) of the CEQA guidelines states that an alternative when implementation is “remote and speculative,” which would be the case for an alternative site that is beyond the control of a project applicant. As such, alternative locations were rejected as infeasible.

#### ***Non-residential Development***

Developing the site with alternative land uses, specifically non-residential uses, was considered as a potential alternative. For example, a previously proposal to develop the site with self-storage facility was considered by the City in 2004. However, this concept was rejected as a feasible alternative for this EIR due to failing to meet the most basic project objectives. A primary purpose of the Project is to develop housing that would assist the city in meeting its housing goals and provide additional recreational opportunities for the existing Wrigley Heights neighborhood. As stated in Section 15126.6(a) of the CEQA

Guidelines, the range of reasonable alternatives selected are those that would feasibly attain most of the basic objectives of the project. A non-residential alternative would not feasibly attain the basic objectives of the project. As such, nonresidential alternatives were not evaluated.

#### 4. ALTERNATIVES EVALUATED

The following alternatives to the Project are evaluated in this section:

- Alternative 1: No Project/No Development
- Alternative 2: Reduced Density Planned Development
- Alternative 3: Single Family Residential Neighborhood

In accordance with CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the Project. As such, the focus of the evaluation is on those environmental resources for which the Project may have potential impacts. As discussed previously in this DEIR, the Project is expected to have potential significant impacts with respect to Air Quality emissions, Paleontological Resources, Construction Noise, Traffic Safety and Tribal Cultural Resources.

#### Alternative 1 – No Project Alternative

##### *Description of Alternative*

In accordance with the CEQA Guidelines, the No Project Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed. CEQA Guidelines Section 15126.6(e)(3)(B) states "in certain circumstances, the No Project Alternative means 'no build' wherein the existing environmental setting is maintained." Accordingly, for purposes of this analysis, Alternative 1, the No Project/No Build Alternative assumes the Project would not be approved and no new development would occur within the Project Site. Therefore, the physical conditions of the Project Site would generally remain as they are today. The Project Site is located on a previous oil process water treatment site which is currently vacant and undergoing remediation. Limited vegetation exists on site. No access through Wardlow Road to the Project Site would be provided. No new construction would occur.

## **Comparative Impacts**

### **Air Quality**

The Project would result in potentially significant impacts due to construction. Specifically, the construction emissions could result in an exceedance of daily NO<sub>x</sub> emissions, which are a function of engine exhaust from construction equipment and trucks. Under a No Project Alternative construction would not occur. As such, No Project Alternative would avoid the proposed project's potentially significant but mitigable construction-related air quality impacts.

In addition, the impact from exposure to pollutants from the adjacent freeways was identified as a potential health risk to future residents. This significant but mitigable impact would also be avoided in the absence of the Project.

### **Geology and Soils**

The potential for impacts to paleontological resources is associated with the ground disturbance during construction. As such, these impacts would be avoided under a No Project alternative. Nonetheless, following established site-specific mitigation measures, the impacts of the Project could be reduced to less than significant.

### **Noise**

The Project would result in potentially significant impacts due to construction. Specifically, construction noise could expose the residents of Wrigley Heights to excessive noise levels. Under a No Project Alternative construction would not occur. As such, the Project's potential noise impacts would be avoided.

### **Transportation**

The Project would have a potential impact on transportation due to the geometric design feature the driveway entrance at Wardlow Road. In a No Project Alternative, this impact would be avoided. Nonetheless, this impact can be mitigated by the installation of a traffic signal.

### **Tribal Cultural Resources**

The potential for impacts to Tribal Cultural Resources is associated with the ground disturbance during construction, which would also occur under the Reduced Density Alternative. As such, these impacts would be avoided under a No Project alternative. Nonetheless, following established site-specific mitigation measures, the impacts of the Project could be reduced to less than significant.

## Alternative 2 – Reduced Density

### *Description of Alternative*

As an alternative planned unit development, this Alternative would consider a reduced number of units compared to the proposed Project though with an equivalent program of residential units and amenities on the 15-acres south of the existing Baker Street and a park on the 5-acre space north of Baker Street.

### *Comparative Impacts*

#### **Air Quality**

The Project would result in potentially significant impacts due to construction. Specifically, the construction emissions could result in an exceedance of SCAQMD's daily significance thresholds for NO<sub>x</sub> emissions, which are a function of engine exhaust from construction equipment and trucks. In addition, the maximum daily localized emissions of PM<sub>2.5</sub> would exceed the SCAQMD LST during periods of heavy construction. As such, a reduced density alternative would result in less construction activity which could therefore reduce the level of NO<sub>x</sub> and PM<sub>2.5</sub> emissions. Therefore, this alternative could result in a reduced impact as compared with the Project. However, the periods of construction which generate the high levels of NO<sub>x</sub> and PM<sub>2.5</sub> are grading and site preparation, including remediation and even with a reduction in units, the extent of grading and site preparation would be equivalent to the Project. As such, even with fewer units, the maximum days of construction activity would be similar to that of the Project.

Furthermore, with implementation of **MM AQ-1** the regional construction-related daily emissions at the Project Site would not exceed SCAQMD's significance thresholds for any criteria pollutant.

In addition, the impact from exposure to pollutants from the adjacent freeways was identified as a potential health risk to future residents. This impact is location specific, thus a different density or configuration of residences on the site would not avoid the impact. Implementation of **MM AQ-2** would reduce these risks to a less than significant level. Similar mitigation would be expected to be applied to this Alternative.

#### **Geology and Soils**

The potential for impacts to paleontological resources is associated with the ground disturbance during construction, which would also occur under the Reduced Density Alternative. Thus, the Reduced Density Alternative would not avoid or reduce significant impacts on paleontological resources. However, like the Project, following established site-specific mitigation measures, could reduce impacts to less than significant.

## Noise

The Project would result in potentially significant impacts due to construction. Specifically, construction noise could expose the residents of Wrigley Heights to excessive noise levels. While a reduced density alternative would result in less construction activity, the peak noise levels would occur during site preparation such as grading, and the physical separation from the existing residences would be the same. As such, even a reduced density alternative would likely result in significant noise impacts on nearby residents without mitigation. However, with implementation of **MM Noise-1** the impacts of the Project and the Alternative could be reduced to less than significant levels.

## Transportation

The Project would have a potential impact on transportation due to the geometric design feature the driveway entrance at Wardlow Road. This impact would be mitigated by the installation of a traffic signal. A Reduced Density Alternative would be expected to include equivalent access and thus equivalent impacts and mitigation.

## Tribal Cultural Resources

The potential for impacts to Tribal Cultural Resources is associated with the ground disturbance during construction, which would also occur under the Reduced Density Alternative. Thus, the Reduced Density Alternative would not avoid or reduce the significant tribal cultural resources impacts of the Project. However, like the Project, following established site-specific mitigation measures, impacts could be reduced to less than significant.

## Conclusion

Under a reduce density alternative, the impacts associated with implementation of the Project could be lessened yet not avoided, as those impacts are associated with construction and access which would still occur under an alternative planned unit development. As shown discussed below this alternative would not meet the basic objectives of the project to the same degree as the Project.

## ***Relationship to Project Objectives***

As shown in **Table V-1: Alternative 2 Relationship to Project Objectives**, a reduced density planned unit development would further the objectives of the Project, just to a lesser extent. A reduction in unit count would not achieve the objective of providing economically viable new housing to the same extent as the Project.

**Table V-1**  
**Alternative 2 Relationship to Project Objectives**

Project Objective	Does the Alternative support the Project objectives?
Clean up the existing hydrocarbon contamination on site, under an approved RAP by LARWQCB and under the supervision of the City's Department of Health and Human Services.	<b>Yes.</b> Development of a reduced density planned unit development would clean up the existing hydrocarbon contamination on site in a similar manner to the proposed Project.
Provide additional public park space in the Wrigley Heights Neighborhood.	<b>Yes.</b> Development of a reduced density planned unit development would include park space equivalent to the Project.
Develop a range of attached and detached single-family with the Long Beach Residential development standards and LBMC to assist the City in meeting the goals for housing production identified in the Housing Element of the General Plan.	<b>To a lesser degree.</b> Development of a reduced density planned unit development would include a lesser number and a more limited range of residences.
Provide economically viable new housing in the Wrigley Heights neighborhood that will meaningfully contribute to addressing the housing needs for the City of Long Beach and provide housing for residents working in the nearby employment centers.	<b>To a lesser degree.</b> Development of a reduced density planned unit development would include a lesser number and a more limited range of residences.
Provide a range of recreational opportunities, including neighborhood parks, pedestrian trails, and bicycle trails segregated from vehicle traffic, which connect with supporting commercial, recreational, and other public facilities, to serve as an alternative to the automobile for surrounding residential neighborhoods and to meet the recreational needs of local residents.	<b>Yes.</b> Development of a reduced density planned unit development would include park space equivalent to the Project.
Enhance the image of the community through visually attractive and high-quality development that is in scale, complements, and blends with the Wrigley Heights community and surrounding open space.	<b>Yes.</b> Development of a reduced density alternative would provide a planned unit development of similar visual character to the Project.
Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation, in compliance with LBMC and the Long Beach General Plan Land Use Element.	<b>Yes.</b> Development of a reduced density alternative would include equivalent design principles and features to the Project.

## Alternative 3 – Single Family Development

### *Description of Alternative*

As an alternative to the proposed planned unit development, the site could be developed with single-family lots consistent with the existing Wrigley Heights neighborhood. A park would still be provided on the 5-acre space north of Baker Street. Site area would be allocated for streets that would connect with the existing neighborhood, and with landscaped biofiltration basins as buffers and stormwater

management. As such, it is estimated that the site could accommodate 60 single family lots as opposed to the 226 units proposed for the Project.

## ***Comparative Impacts***

### **Air Quality**

The Project would result in potentially significant impacts due to construction. Specifically, the construction emissions could result in an exceedance of daily NO<sub>x</sub> emissions, which are a function of engine exhaust from construction equipment and trucks. In addition, the maximum daily localized emissions of PM<sub>2.5</sub> would exceed the SCAQMD LST during periods of heavy construction. As such, a Single-Family alternative would result in less construction activity which would therefore reduce the level of NO<sub>x</sub> and PM<sub>2.5</sub> emissions. Therefore, this alternative could reduce a significant impact associated with this Project. However, the periods of construction which generate the high levels of NO<sub>x</sub> and PM<sub>2.5</sub> are grading and site preparation, including remediation and even with a reduction in units, the extent of grading and site preparation would be equivalent to the Project. As such, even with fewer units, the maximum days of construction activity would be similar to that of the Project.

Furthermore, with implementation of **MM AQ-1** the regional construction-related daily emissions at the Project Site would not exceed SCAQMD's significance thresholds for any criteria pollutant. In addition, the impact from exposure to pollutants from the adjacent freeways was identified as a potential health risk to future residents. This impact is location specific, thus a different density or configuration of residences on the site would not avoid the impact. Implementation of **MM AQ-2** would reduce these risks to a less than significant level. Similar mitigation would be expected to be applied to this Alternative.

### **Geology and Soils**

The potential for impacts to paleontological resources is associated with the ground disturbance during construction, which would also occur under the Single-Family Alternative. Thus, the Single-Family Alternative would not avoid or reduce significant impacts on paleontological resources. However, like the Project, following established site-specific mitigation measures, could reduce impacts to less than significant.

### **Noise**

The Project would result in potentially significant impacts due to construction. Specifically, construction noise could expose the residents of Wrigley Heights to excessive noise levels. While a reduced density alternative would result in less construction activity, the peak noise levels would occur during site

preparation such as grading, and the physical separation from the existing residences would be the same. As such, even a Single-Family alternative would likely result in significant noise impacts on nearby residents without mitigation. However, with implementation of **MM Noise-1** the impacts of the Project and the Alternative could be reduced to less than significant levels.

### **Transportation**

The Project would have a potential impact on transportation due to the geometric design feature the driveway entrance at Wardlow Road. This impact would be mitigated by the installation of a traffic signal. The circulation for a Single-Family Alternative could be integrated into the existing Wrigley Heights neighborhood and utilize the existing signalized intersection of Wardlow Road and Magnolia Avenue as the point of access. This could avoid the potential impact of access directly onto Wardlow Road, though would increase traffic through the existing neighborhood. However, it should be noted that the potential impact of the Project's access to Wardlow road would be mitigated by the installation of a traffic signal.

### **Tribal Cultural Resources**

The potential for impacts to Tribal Cultural Resources is associated with the ground disturbance during construction, which would also occur under the Single-Family Alternative. Thus, the Single-Family Alternative would not avoid or reduce the significant tribal cultural resources impacts of the Project. However, like the Project, following established site-specific mitigation measures, impacts could be reduced to less than significant.

### **Conclusion**

Under a single-family alternative, most of the impacts associated with implementation of the Project could be lessened yet not avoided, as those impacts are associated with construction. The potential safety impact of an access point on Wardlow Road would be avoided, though with an increase of traffic within the Wrigley Heights neighborhood. As shown discussed below this alternative would not meet the basic objectives of the project to the same degree as the Project.

### ***Relationship to Project Objectives***

As shown in **Table V-2: Alternative 3 Relationship to Project Objectives**, a single-family development would further the objectives of the Project to a lesser extent. The reduction in housing units would not achieve the objective of providing economically viable new housing to the same extent as the Project.

**Table V-2**  
**Alternative 3 Relationship to Project Objectives**

<b>Project Objective</b>	<b>Does the Alternative support the Project objectives?</b>
Clean up the existing hydrocarbon contamination on site, under an approved RAP by LARWQCB and under the supervision of the City's Department of Health and Human Services.	<b>Yes.</b> Development of a single-family development would clean up the existing hydrocarbon contamination on site in a similar manner to the proposed Project.
Provide additional public park space in the Wrigley Heights Neighborhood.	<b>Yes.</b> Development of a single-family development would include park space equivalent to the Project.
Develop a range of attached and detached single-family with the Long Beach Residential development standards and LBMC to assist the City in meeting the goals for housing production identified in the Housing Element of the General Plan.	<b>To a lesser degree.</b> Development of a single-family development would include a lesser number and a more limited range of residences.
Provide economically viable new housing in the Wrigley Heights neighborhood that will meaningfully contribute to addressing the housing needs for the City of Long Beach and provide housing for residents working in the nearby employment centers.	<b>To a lesser degree.</b> Development of a single-family development would include a lesser number and a more limited range of residences.
Provide a range of recreational opportunities, including neighborhood parks, pedestrian trails, and bicycle trails segregated from vehicle traffic, which connect with supporting commercial, recreational, and other public facilities, to serve as an alternative to the automobile for surrounding residential neighborhoods and to meet the recreational needs of local residents.	<b>Yes.</b> Development of a single-family development would include park space equivalent to the Project.
Enhance the image of the community through visually attractive and high-quality development that is in scale, complements, and blends with the Wrigley Heights community and surrounding open space.	<b>Yes.</b> Development of a single-family development would provide development for a similar scale to the Wrigley Heights neighborhood.
Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation, in compliance with LBMC and the Long Beach General Plan Land Use Element.	<b>Yes.</b> Development of a reduced density alternative would include equivalent design principles and features to the Project.

## 5. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) requires that an EIR identify an environmentally superior alternative among the alternatives evaluated. If the “no project” alternative is the environmentally superior alternative, the EIR must identify another environmentally superior alternative among the remaining alternatives.

As shown in **Table V-3: Comparison of Alternative Impacts to the Proposed Project**, the Single-Family Alternative would avoid the potential traffic impact of the Project by connecting to the exiting neighborhood streets of Wrigley Heights. As such, it would be an environmentally superior alternative. However, because the Single-Family Alternative would result in a substantial reduction in the number of units developed, it would meet the project objectives to a lesser degree. Furthermore, the potentially significant impacts of the Project can all be lessened to a less than significant level through mitigation measures and still meet the Project’s objectives to the full extent possible.

**Table V-3  
Comparison of Alternative Impacts to the Proposed Project**

<b>Environmental Topic</b>	<b>Proposed Project</b>	<b>No Project Alternative</b>	<b>Reduced Density Alternative</b>	<b>Single-Family Alternative</b>
<b>Air Quality</b>	Less than Significant after Mitigation	Avoided	Similar Yet still Less than Significant after Mitigation	Reduced Yet still Less than Significant after Mitigation
<b>Geology and Soils</b>	Less than Significant after Mitigation	Avoided	Similar	Similar
<b>Noise</b>	Less than Significant after Mitigation	Avoided	Similar	Similar
<b>Transportation</b>	Less than Significant after Mitigation	Avoided	Similar	<b><i>Avoided</i></b>
<b>Tribal Cultural Resources</b>	Less than Significant after Mitigation	Avoided	Similar	Similar

## VI. OTHER ENVIRONMENTAL CONSIDERATIONS

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### 1. SIGNIFICANT UNAVOIDABLE IMPACTS

California Environmental Quality Act (CEQA) Guidelines section 15126<sup>1</sup> requires that all phases of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. Further, CEQA Guidelines section 15126.2(a) requires that the evaluation of significant impacts consider direct and reasonably foreseeable indirect effects of the proposed Project over the short-term and long-term. The Environmental Impact Report (EIR) must identify (1) significant environmental effects that cannot be avoided if the proposed Project is implemented, (2) significant irreversible environmental changes that would result from implementation of the proposed Project, (3) effect found not to be significant, and (4) growth-inducing effects of the proposed Project.

CEQA Guidelines section 15126.2(c) requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Based on the analysis of each section of this Draft EIR, the foreseeable potentially significant environmental effects created by the proposed Project would be feasibly mitigated through implementation of mitigation measures that have been addressed previously in this Draft EIR.

### 2. REASONS WHY THE PROJECT IS BEING PROPOSED, NOTWITHSTANDING SIGNIFICANT UNAVOIDABLE IMPACTS

In addition to identification of a project's significant unavoidable impacts, CEQA Guidelines Section 15126.2(b) requires that an EIR describe the reasons why a project is being proposed, notwithstanding the effects of the identified significant and unavoidable impacts. Based on the analysis conducted within this Draft EIR document, no significant and unavoidable impacts were identified for any of the environmental topic areas.

The reasons why the Project has been proposed are explained in a comprehensive list of Project objectives included in **Section II: Project Description** of this Draft EIR with further explanation below. The overall purpose of the proposed Project include cleaning up the existing contaminated Project Site, adding public park space, and developing a range of attached and detached single-family residential homes in the area. The proposed Project would help accommodate the need for housing in the area. Included in the proposed Project would be 226 single-family residential homes consisting of approximately 15 acres and 5 acres of public Open Space. Under existing conditions, the Project Site is undeveloped except for remnants of the previous water treatment plant that existed on the property from the 1920's to the 1980's. Prior to development, the contaminated soil and groundwater on the Project Site will be remediated under an

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1 CEQA Guidelines sections 15126.2(a), (c-e).

approved Remedial Action Plan (RAP) by the Los Angeles Regional Water Quality Control Board (LARWQCB). The proposed Project would enhance the image of the community through attractive and high-quality development and create additional housing that is next to a major transit stop. A 5-acre public recreational space would also be available with multiple passive and active uses. In addition, the Project would further the goals of the Long Beach General Plan Elements.

### 3. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Under CEQA, an EIR must evaluate the extent to which the Project primary and secondary effects would generally commit future generations to the allocation of nonrenewable resources and to irreversible environmental damage. Specifically, CEQA Guidelines section 15126.2(d)<sup>2</sup> states:

*Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

The proposed Project would necessarily consume limited, slowly renewable, and nonrenewable resources, resulting in irreversible environmental changes. This consumption would occur during construction of the proposed Project and would continue throughout its operational lifetime. The development of the proposed Project would require a commitment of resources that would include: (1) building materials and associated solid waste disposal effects on landfills; (2) water; and (3) energy resources for electricity, natural gas, and transportation and the associated impacts related to air quality and greenhouse gas emissions.

### Environmental Hazards

The Project's potential use and treatment of hazardous materials is addressed in **Section IV.H: Hazards and Hazardous Materials**. The Project Site was used for the treatment of oil field production brines, water and wastewater, and other fluid by-products generated by oil production activities in the area from 1926 to 1988. Consequently, chemicals of concern (COCs) were found present on-site including oil, concentrations of lead, and arsenic. Remediation of the residual oil in the settling basins has been ongoing since 2001 and the soil in the settling basins have been regularly tilled as part of the remediation activities. Additionally, vapor extraction systems (VES) were installed to remove volatile and semi-volatile

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<sup>2</sup> CEQA Guidelines sections 15126.2(d).

contaminants from 2012 to the present day. As required by LARWQCB, an approved Remedial Action Plan (RAP) with identified actions to remove on-site contaminants will be approved by LARWQB and implemented prior to the commencement of construction activities. The implementation of an approved RAP will remove and mitigate the existing COCs on site, rendering the potential for creating accidental and significant hazards to the public or the environment to a less than significant level.

During construction, typical, although potentially hazardous, construction materials would be used—including vehicle fuels, paints, mastics, solvents, and other acidic or alkaline solutions—that would require special handling, transport, and disposal potentially hazardous materials. All potentially hazardous materials used during construction would be used and stored in compliance with applicable federal, State, and local regulations. Operation and maintenance of the proposed residential Project would not involve the routine transport, use, or disposal of hazardous materials. As the use and transport of these hazardous materials would be limited, in terms of volume and duration, these materials are not considered a significant hazard to the public or environment. Additionally, the LBFD would have the authority to perform inspections and enforce federal and State laws governing the storage, use, transport, and disposal of hazardous materials and wastes. Compliance with regulations and standards would serve to protect against significant and irreversible environmental changes that could result from the accidental release of hazardous materials.

### **Building Materials and Solid Waste**

Construction of the proposed Project would require the consumption of resources that do not replenish themselves or which may renew so slowly as to be considered nonrenewable. These resources would include certain types of lumber and other forest products, aggregate materials used in concrete and asphalt, metals, and petrochemical construction materials.

During construction and operation of the proposed Project, compliance with the Resource Conservation and Recovery Act (RCRA), which sets national goals for reducing the amount of waste generated and ensures that wastes are managed in an environmentally sound manner. The proposed Project would also comply with the Resource Conservation Challenge (RCC) to prevent pollution and promote reuse and recycling, reduce priority and toxic chemicals in products and waste, and conserve energy and materials. Assembly Bill (AB) 939 would be consistent with the Project through resource conservation efforts such as reduction, recycling, and reuse of solid waste. Long Beach Municipal Code (LBMC) Chapter 8.60 establish standards and guidelines regarding refuse and recycling receptacles, which would be adhered to by the proposed Project during operation. Also, in response to the State-mandated waste reduction goals, the City adopted an ordinance that requires construction projects to divert 65 percent of waste generated during construction. The proposed Project would be consistent with the applicable regulations associated

with solid waste. Specifically, the Project would comply with RCRA, RCC, AB 939, and City goals, as applicable, through measures such as the provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is operational. Thus, the consumption of nonrenewable building materials, such as lumber, aggregate materials, and plastics, would be reduced. Furthermore, as discussed in **Section 4.O: Utilities** of this Draft EIR, Project impacts with respect to solid waste generation and compliance with federal, State, and local solid waste regulations would be less than significant.

## **Water**

Water usage during the construction and operation of the proposed Project is presented in **Section IV.O** of this Draft EIR. As discussed, the proposed Project would result in short-term and long-term water demand due to water consumption, building operations, maintenance, and other activities on the Project Site. The Long Beach Water Department (LBWD) would be able to meet the water demand for the Project during both the construction phase and the operation phase. Furthermore, the proposed Project would follow the guidelines according to the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA) in order to reduce pollution and contaminants in the drinking water supply. The proposed Project has also been designed to achieve the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification. This would include certain water efficiency standards such as high-efficiency fixtures; a reduction in aggregate water consumption by 20 percent from established baselines; and a reduction in outdoor water usage by at least 30 percent using specific plants in landscaping and efficient irrigation systems. As such, while Project operation would result in the irreversible consumption of water, the proposed Project would result in a less than significant impact related to water supply. **Section IV.O** further explains the use of water supplies during the construction and operation of the proposed Project and Project consistency with federal, state, and local requirements.

## **Energy Consumption and Air quality**

Project consumption of nonrenewable fossil fuels for energy use during construction and operation of the proposed Project is addressed in **Section IV.E: Energy**. During construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control, and on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment within the Project Site, construction worker travel, haul trips, and delivery trips. Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would likely not be needed to support construction activities; thus, there would be little to no demand generated by construction.

As evaluated in **Section IV.E**, the proposed Project's increase in electricity and natural gas demand would be within the service capabilities of Long Beach Energy Resources Department and Southern California Edison (SCE). In addition to complying with Title 24 and CALGreen, the proposed Project would provide means for indirect energy savings, such as permitting individual solar panels to be applied to the proposed residential uses. This would be installed in compliance with Title 24 Section 110.10, which includes mandatory regulations for solar-ready buildings and would not preclude the use of alternate energy sources. As energy consumption during Project construction activities would be relatively negligible, the proposed Project is not anticipated to affect regional energy consumption in years during the construction period. In sum, energy consumption during Project construction and operations in the context of regional supplies would be relatively negligible and energy requirements are within SCE's and LBER's forecasted supply delivery capacity. Additionally, electricity demand during construction and operation of the proposed Project would have a negligible effect on the overall capacity of SCE's power grid base peak demand conditions and LBER's forecasted demand. Moreover, the proposed Project's gas and diesel fuel demand related to vehicle travel and on-site operations would account for a small percentage of the forecasted gas and diesel consumption. Short-term and long-term impacts associated with the consumption of fossil fuels would not be significant.

## **Conclusion**

As discussed above, the proposed Project would require the commitment of slowly renewable and nonrenewable resources for the construction and operation of the proposed Project. This would in effect limit the availability of these resources and the Project's building site for future generations or for other uses during the life of the proposed Project. At the same time, the Project would contribute LEED certified housing to an area deficient in such, and would reduce the consumption of nonrenewable resources when considered in a larger context. In addition to this, the consumption of such resources would not be considered substantial and would be consistent with regional and local growth forecasts and development goals for the area. These goals are intended to reduce resource consumption by incorporating sustainable design features. The loss of such resources was found to not be highly accelerated when compared to existing conditions and resources would be used efficiently so as to reduce waste. Lastly, actions would be taken to remove COCs existing on the Project Site to reduce the potential of hazardous material exposure to the public. Therefore, although irreversible environmental changes would result from the proposed Project, such changes are concluded to be less than significant.

## **4. GROWTH-INDUCING IMPACTS**

Section 15126.2(d) of the CEQA Guidelines requires that growth-inducing impacts of a project be considered in a Draft EIR. Growth-inducing impacts are characteristics of a project that could directly or indirectly foster economic or population growth or the construction of additional housing, either directly

or indirectly, in the surrounding environment. According to CEQA Guidelines, such projects include those that would remove obstacles to population growth (e.g., a major expansion of a wastewater treatment plant that, for example, may allow for more construction in service areas). In addition, as set forth in the CEQA Guidelines, increases in the population may tax existing community service facilities, thus requiring the construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also require a discussion of the characteristics of projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Finally, the CEQA Guidelines state that it must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment. Growth can be induced as follows:

- Direct growth associated with a project;
- Indirect growth created by either the demand not satisfied by a project or the creation of surplus infrastructure not utilized by a project.

The proposed Project would construct 226 single-family residential homes and an Open Space area on approximately 886,000 sq. ft. or 20 total acres. The residential development would constitute 15 acres and the Open Space would accommodate 4.8 acres on a parcel just north of the residential development. The Project would introduce a new residential population to the area. According to the United States Census Bureau, the average household size for the City of Long Beach is 2.8 persons per household.<sup>3</sup> Based on this average household size, the Project is expected to result in an increase of approximately 624 residents.

Project construction would create temporary construction-related jobs, the work requirements of most construction projects are highly specialized such that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process. Thus, Project-related construction workers would not be anticipated to relocate to the Project area as a consequence of working on the proposed Project and, therefore, new permanent residents generally would not be generated during Project construction.

The Southern California Association of Governments' (SCAG) 2045 population projections for the City estimates that population would increase from 470,900 residents in 2016 to 489,600 in 2045, an increase of 18,700 residents.<sup>4</sup> Therefore, the proposed Project would generate approximately 3.3 percent of the anticipated increase in residents within the SCAG region between 2016 and 2045. Operation of the

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3 United States Census Bureau, City of Long Beach Quick Facts, <https://www.census.gov/quickfacts/longbeachcitycalifornia>, accessed May 2021.

4 The Southern California Association of Governments, Demographics & Growth Forecast, [https://scag.ca.gov/sites/main/files/file-attachments/0903connectsocial\\_demographics-and-growth-forecast.pdf?1606001579](https://scag.ca.gov/sites/main/files/file-attachments/0903connectsocial_demographics-and-growth-forecast.pdf?1606001579), accessed May 2021.

proposed Project would not induce substantial unplanned population growth in the Project area, either directly or indirectly and would not exceed regional or local growth projections.

With regard to employment, the proposed Project would support an increase in residences within the City. Therefore, the proposed Project would not cause an exceedance of SCAG's employment projections, nor would it induce substantial indirect population or housing growth related to Project-generated employment opportunities.

The surrounding Project Site is currently developed with similar uses. While the proposed Project may require local infrastructure upgrades to maintain and improve water, sewer, electricity, and natural gas lines on-site and in the immediate vicinity, such improvements would be intended primarily to meet Project-related demand and would not necessitate regional utility infrastructure improvements that have not otherwise been accounted for and planned for on a regional level. In addition, proposed Project access improvements would be limited to driveways necessary to provide immediate access to the Project Site.

Overall, the proposed Project would be consistent with the growth forecast for the Los Angeles Subregion, and would be consistent with regional policies to reduce urban sprawl and efficiently utilize existing infrastructure. Therefore, growth inducing impacts would be less than significant.

## 5. POTENTIAL SECONDARY EFFECTS

CEQA Guidelines Section 15126.4(a)(1)(D) says that:

*If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed.*

As described in the CEQA Guidelines Section, the potential impacts which could result from implementation of each mitigation measure proposed as part of the proposed Project was reviewed. The following provides a summary of the potential secondary impacts that might occur as a result of the implementation of the proposed mitigation measures, for those environmental issue areas where mitigation is provided.

### Air Quality

**Mitigation Measure AQ-1** requires on-site construction equipment fleet must meet Environmental Protection Agency (EPA) Tier 4 Final standards for all off-road diesel-powered construction equipment greater than 50 horsepower (hp) and would require all construction equipment to be outfitted with Best Available Control Technology (BACT) devices certified by California Air Resources Board (CARB). **Mitigation Measure AQ-2** would incorporate the following design features to reduce potential cancer risk: locate

outdoor areas, such as balconies and courtyards, as far from the freeway and roadway segment as possible; plant vegetation between residential receptors and the freeway; install, operate, and maintain an heating, ventilation, and air conditioning (HVAC) system that uses high-efficiency filters of Minimum Efficiency Reporting Value (MERV) 14 or higher for the residential units (suggested use of MERV 16); locate the air intakes for the uses as far from the freeway as possible; and provide a disclosure letter to all new residents that discusses the potential risk from living within close proximity of the freeway and roadway segment, and points out that opening windows reduces the effectiveness of implemented reduction measures and increases individuals' exposure and hence risk. With the implementation of these mitigation measures and project design features, maximum regional emissions would be reduced to a less than significant level. Implementation of these mitigation measures would reduce the construction emissions for all pollutants and would not result in adverse secondary impacts.

## **Biological Resources**

**Mitigation Measure BIO-1** requires ground clearing during construction to be conducted in a manner that avoids impacts to birds nesting on site. This mitigation would be incorporated into the construction management process and would not result in other secondary impacts.

## **Geology**

**Mitigation Measure GEO-1** would enact the Worker's Environmental Awareness Program (WEAP). Prior to the start of the proposed Project activities, all field personnel will receive a worker's environmental awareness training on paleontological resources. **Mitigation Measure GEO-2** requires that prior to the commencement of ground-disturbing activities, a professional paleontologist will be retained to prepare and implement a paleontological resource mitigation and monitoring plan (PRMMP) for the proposed Project. **Mitigation Measure GEO-3** says that in the event that a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. **Mitigation Measure GEO-4** would require, upon completion of ground disturbing activity (and curation of fossils if necessary), the Project Paleontologist should prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report should include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated. As such, implementation of these mitigation measures would not result in adverse secondary impacts.

## **Noise**

**Mitigation Measure N-1** requires the Applicant to utilize, without limitation, the following construction best management practices: shroud or shield all impact tools, and muffle or shield all intake and exhaust

port on power equipment to reduce construction noise by 10 dB or more; if feasible, schedule grading activities so as to avoid operating numerous pieces of heavy-duty off-road construction equipment (e.g., backhoes, dozers, excavators, loaders, or rollers) simultaneously in close proximity to the boundary of properties of off-site noise sensitive receptors surrounding the Project Site to reduce construction noise levels by approximately 14 dBA; where feasible, temporary barriers including, without limitation, sound blankets on existing fences and walls, or freestanding portable sound walls, must be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. The noise and vibration from the installation of the temporary sound barrier would be short-term and would be required to comply with City noise thresholds. These requirements would not result in adverse long-term secondary impacts.

## **Transportation**

**Mitigation Measure Trans-1** requires the Applicant to install a traffic signal at the entrance to the Project on Wardlow Road. The construction of the signal would be short-term and would be required to comply with City permit requirement for constructions within a right of way. These requirements would not result in adverse long-term secondary impacts.

## **Tribal Cultural**

**Mitigation Measure TCR-1** shall require the Applicant to retain and compensate for the services of a Tribal monitor/consultant who is both ancestrally affiliated with the project area and approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the Native American Heritage Commission's (NAHC) Tribal Contact list for the area of the project location. **Mitigation Measure TCR-2** would require upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. **Mitigation Measure TCR-3** requires that any discovered TCRs shall be preserved in place and if this is not feasible, then data may be recovered before removal. **Mitigation Measure TCR-4** says that Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. **Mitigation Measure TCR-5** would require a minimum of 150 foot exclusion zone created around the discovery location of any remains and any work be diverted. **Mitigation Measure TCR-6** states that the Gabrieleño Band of Mission Indians – Kizh Nation shall implement the Koo-nas-gna Burial Policy if human remains are discovered. **Mitigation Measure TCR-7** requires prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. These mitigation measures were included to address concerns raised during consultation with the Gabrieleño Band of

Mission Indians – Kizh Nation and pertain to construction monitoring. Furthermore, these mitigation measures, while implemented, would not result in secondary adverse effects to the physical environment.

## **6. EFFECTS FOUND NOT TO BE SIGNIFICANT**

Section 15128 of the CEQA Guidelines requires that an EIR “contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and therefore were not discussed in detail in the EIR.”

The Initial Study (see **Appendix I.1**) was published in February 2021 and determined that an EIR would be prepared in compliance with CEQA to analyze potentially significant impacts that may result from the Project. As such, a Notice of Preparation (NOP) (see **Appendix I.2**) was circulated and comments were received from the public and agencies following a 46-day comment period that begin on February 25, 2021 and concluded on April 12, 2021. The following analysis is based on the findings within the Initial Study.

Impacts determined by the Initial Study to be potentially significant, as well as included in this Draft EIR are addressed in detail in **Section IV: Environmental Impact Analysis**. The discussion below presents the analysis of the effects related to specific thresholds for the impacts identified in the Initial Study that were not found to be significant. All impacts for the issues discussed in this section would be less than significant or have no impact.

### **Agricultural and Forestry Resources**

Would the proposed Project:

- a) Threshold: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?**

Significant impacts would occur if the proposed Project were to adversely impact Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

The Project Site is located on vacant land in the City of Long Beach and does not include any agricultural land. In addition, the Project Site and surrounding area are not mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation’s Division of Land Resource Protection. The Project would not convert farmland to a nonagricultural use. No impacts would occur, and no mitigation measures are required.

**b) Threshold: Conflict with existing zoning for agricultural use, or Williamson Act contract?**

The Project Site is not zoned for agricultural use under the Long Beach Municipal Code, and no agricultural zoning is present in the surrounding area.<sup>5</sup> The Project Site and surrounding area are not enrolled under a Williamson Act Contract.<sup>6</sup> Therefore, the Project would not conflict with existing zoning for agricultural uses or a Williamson Act Contract. No impacts would occur, and no mitigation measures are required.

**c) Threshold: Conflict with existing zoning for, or cause rezoning of, forestland (as defined in PRC section 12220(g)), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

The Project Site is located in a developed portion of the City and does not include any forest land or timberland. Additionally, the Project Site is currently zoned R-1-N and CS, and is not zoned for forest land, and is not used as forest land.<sup>7</sup> Therefore, the Project would not rezone forest land or timberland as defined by the Public Resources Code (PRC). No impacts would occur, and no mitigation measures are required.

**d) Threshold: Would the Project result in the loss of forest land or conversion of forest land to non-forest use?**

As mentioned above, the Project Site is located in a developed area of the City, is not zoned for forest land, and does not include any forest or timberland. Therefore, the Project would not result in the loss or conversion of forest land. No impacts would occur, and no mitigation measures are required.

**e) Threshold: Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to nonagricultural use, or conversion of forestland to non-forest use?**

As noted above, the Project Site is located in a developed area of the City and does not contain any agricultural or forest uses, nor are any agricultural or forest uses located in the Project vicinity. Thus, Project development would not convert any farmland or forest land to nonagricultural or non-forest use. No impacts would occur, and no mitigation measures are required.

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5 City of Long Beach, Zoning Map, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/maps/zoning-maps/zoning\\_color\\_15](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/maps/zoning-maps/zoning_color_15), accessed July 2020.

6 California Department of Conservation, California Important Farmland Finder, <https://maps.conservation.ca.gov/dlrp/ciff/>, accessed May 2020.

7 City of Long Beach, Zoning Map, [http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/maps/zoning-maps/zoning\\_color\\_15](http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/maps/zoning-maps/zoning_color_15), accessed July 2020.

## Land Use and Planning

Would the proposed Project:

**a) Threshold: Physically divide an established community?**

As previously described, the Project Site is located on a vacant site at the western edge of the Wrigley Heights neighborhood. The Wrigley Heights neighborhood is bounded by Wardlow Road to the south, LA River to the West, the 405 Freeway to the north and the Pacific Place Road to the east. Neighborhoods immediately adjacent to the Project Site include Bixby Knolls across Interstate 405 to the north and North Wrigley to the south across Wardlow Road. Majority of the Project Site is surrounded by residential neighborhoods, with commercial and office uses across the Interstate 710 and 405 interchange to the northwest, in the City of Carson.

The Project proposes to develop 226 single-family detached and attached homes with a 5-acre open space recreational area on 20-acres of vacant land on the western edge of the Wrigley Heights neighborhood. Primary access would be provided from W. Wardlow Road at a new signalized intersection. Emergency access would be provided from the intersection of Baker Street and Golden Avenue. Both would be private gated access points. No off-site improvements, including street improvements are proposed that would physically divide or disrupt the Wrigley Heights neighborhood or isolate any of the established surrounding neighborhoods. The Project would add additional residential units to the existing residential Wrigley Heights neighborhood and an open space area that would complement the existing Baker Street Park. Based on the location of the Site and the characteristics of the Project as proposed, on the Project would not physically divide an established community, and no mitigation measures would be required.

**b) Threshold: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigation an environmental effect?**

As previously discussed, the Project Site is located in an urbanized area with a General Plan designation for Founding and Contemporary Neighborhood (FCN). A waiver for the height limitation is requested by the applicant in exchange for providing 5 percent affordable housing on-site. The Project would offer 11 affordable housing units out of the proposed 226 units. The waiver is consistent with the California Density Bonus Law, State of California Government Code Section 65915 and the LBMC Chapter 21.63- Incentives for Affordable Housing. The height limitation waiver would allow the Project to include 3-story buildings in an area designated for 2-story buildings under the General Plan.

The Project Site is currently zoned for Commercial Storage (CS) and Single Family Residential Standard Lot (R-1-N) use, with a Horse Overlay District over the parcels on the east side of the Project Site. A zone

change of the Project Site to Residential Planned Unit Development (PUD) is proposed with this Project. Residential PUD is established to achieve greater flexibility and encourage innovative and creative design through good urban planning principals, with efficient use of land, a mixture of densities, and diverse housing opportunities and on-site community facilities. This proposed zoning would be consistent with the General Plan. The Project would have a less than significant impact on project conflict with applicable zoning and other regulations after the height waiver and the implementation of the proposed zone change, no mitigation measure is required.

## Mineral Resources

Would the project:

- a) Threshold: Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?**

The Project Site is located within a developed area and has been previously disturbed by its use as a water treatment facility for oil well production. While the Project Site is mapped within the Long Beach Oil Field, there are no indications of any production or exploratory wells being drilled on or in the immediate vicinity of the Site.<sup>8</sup> The nearest active production well is located 0.5 miles east of the Project Site.<sup>9</sup> Based on the lack of historic and/or active mineral extraction activities on or surrounding the Project Site, the Project would not result in the loss of availability of a mineral resource or a mineral resource recovery site. The Project Site is also not located in a Mineral Resource Zone.<sup>10</sup> A less than significant impact would occur, and no mitigation measures would be required.

- b) Threshold: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

As noted above, the Project Site is mapped within the Long Beach Oil Field, but there are no active oil wells on-site. In addition, the Project Site is not classified by the California Department of Conservation as an area containing significant mineral deposits nor is the Project Site located in an aggregate producing

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8 California Department of Conservation, Geologic Energy Management Division, <https://maps.conservation.ca.gov/doggr/>, accessed May 2020.

9 California Department of Conservation, Geologic Energy Management Division, <https://maps.conservation.ca.gov/doggr/>, accessed May 2020.

10 California Department of Conservation, Mineral Land Classification, <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>, accessed May 2020.

area as classified by the California Geological Survey.<sup>11,12</sup> Therefore, the Project would not result in the loss of availability of a locally important mineral resource recovery site. A less than significant impact would occur, and no mitigation measures would be required.

## Population, Employment, and Housing

Would the proposed Project:

- a) Threshold: Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

The Project proposes 226 single-family detached and attached dwelling units. Project construction would create temporary construction-related jobs, the work requirements of most construction projects are highly specialized such that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process. Thus, Project-related construction workers would not be anticipated to relocate their household's place of residence as a consequence of working on the Project and, therefore, new permanent residents generally would not be generated during Project construction.

According to the United States Census Bureau, the average household size for the City of Long Beach is 2.76 persons per household.<sup>13</sup> Based on this average household size, the Project is expected to result in an increase of approximately 624 residents. SCAG's 2045 population projections for the City estimates that population would increase from 470,900 residents in 2016 to 489,600 in 2045, an increase of 18,700 residents.<sup>14</sup> Therefore, Project generated population increase would represent approximately 3.3 percent of the anticipated increase in residents within the SCAG region between 2016 and 2045. Operation of the Project would not induce substantial unplanned population growth in the Project area, either directly or indirectly and would not exceed regional or local growth projections. Therefore, impacts would be less than significant and no mitigation is required.

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- 11 California Department of Conservation, Mineral Land Classification, <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>, accessed May 2020.
- 12 State of California Department of Conservation, California Geologic Survey, Aggregate Sustainability in California, [https://www.conservation.ca.gov/cgs/Documents/MS\\_052\\_California\\_Aggregates\\_Map\\_201807.pdf](https://www.conservation.ca.gov/cgs/Documents/MS_052_California_Aggregates_Map_201807.pdf), accessed May 2020.
- 13 United States Census Bureau, City of Long Beach Quick Facts, <https://www.census.gov/quickfacts/longbeachcitycalifornia>, accessed May 2020.
- 14 The Southern California Association of Governments, Demographics & Growth Forecast, [https://scag.ca.gov/sites/main/files/file-attachments/0903connectsocial\\_demographics-and-growth-forecast.pdf?1606001579](https://scag.ca.gov/sites/main/files/file-attachments/0903connectsocial_demographics-and-growth-forecast.pdf?1606001579), accessed February 2021.

**b) Threshold: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

The Project Site is vacant and does not contain any existing housing. Therefore, the Project would not displace any existing housing. No impacts would occur, and no mitigation measures are required.

## Public Services

**a) Threshold: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 public services:**

**i. Fire protection?**

The Long Beach Fire Department (LBFD) provides fire protection throughout the City. The LBFD maintains 1 fire headquarter, 1 beach operation facility, and 23 fire stations within the City.<sup>15</sup> The nearest fire station to the Project Site is Fire Station No. 9, located at 3917 Long Beach Boulevard, approximately 1.1 mile northeast of the Project Site.

While the Project would introduce additional residents to the Project Site, the Project does not include uses that pose a significant fire hazard. Project design would be subject to the requirements set forth in the California Fire Code, California Building Code, the LBMC, and LBFD requirements for fire access. The Project plans would be subject to LBFD site/building plan review, which would ensure adequate emergency access, fire hydrant availability, and compliance with all applicable codes. As such, LBFD access and response times would not be significantly impacted by the addition of Project traffic.

Nevertheless, the increase in development on the Project Site could increase the demand for fire protection services in the area. LBMC Chapter 18.23, Fire Facilities Impact Fee, was adopted to ensure development projects pay their fair share of the costs required to support needed fire facilities and related costs necessary to accommodate such development. Compliance with LBMC Chapter 18.23, which requires payment of the fire facilities impact fee, would ensure Project implementation would result in a less than significant impact on fire protection services. Therefore, compliance with existing California Fire Code, California Building Code, LBMC, and LBFD requirements, including payment of the fire facilities

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15 Long Beach Fire Department, Station Locations, <http://www.longbeach.gov/fire/about-us/station-locations/>, accessed May 2020.

impact fee, impacts with respect to fire protection services would be less than significant, and no mitigation measures are required.

**ii. Police protection?**

The Long Beach Police Department (LBPD) provides police protection throughout the City. The LBPD is the second largest municipal police agency in Los Angeles County, with over 800 sworn officers and a total staff of over 1,200 personnel.<sup>16</sup> LBPD has many specialized service units to fulfill a variety of public safety functions and responsibilities. These specialized teams include, but are not limited to, the Special Weapons and Tactics (SWAT) team, Police Service Dog Unit, Motor Patrol Officers, Mental Evaluation Team (MET), Hostage Negotiators, Air Support Unit, and Detectives. The current citywide officer to resident ratio is 1.73 officers per 1,000 residents.<sup>17</sup>

The City of Long Beach is organized into quadrants. The Patrol Bureau includes one specialized Field Support Division and three geographical divisions: North, East and West. The Patrol Bureau focuses on community policing accomplished by community policing teams consisting of sworn employees and civilian support staff. These proactive teams promote personal safety and crime prevention.<sup>18</sup>

The Project Site is located in LBPD's North Patrol Division, which is headquartered at 4891 Atlantic Avenue, approximately 3.1 miles northeast of the Project Site. While the Project would increase residents in the area, the proposed residential use is consistent with the Long Beach General Plan Land Use Element update.<sup>19</sup>

In accordance with LBMC Chapter 18.22, which requires "new residential and nonresidential development for the purpose of assuring that the impacts created by the proposed development shall pay its fair share of the costs required to support needed police facilities and related costs necessary to accommodate the development." The City's impact fee for police service would be collected to reduce the impacts of the Project on local police services. The Project would not cause substantially delayed response times, degraded service ratios or necessitate construction of new facilities, due to the size of the development and the location in an already developed and well served area. Impacts would be less than significant.

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<sup>16</sup> Long Beach Police Department, About the LBPD, <http://longbeach.gov/police/about-the-lbpd/>, accessed May 2020.

<sup>17</sup> Based on United States Census Bureau population estimates of 462,628, City of Long Beach Quick Facts, <https://www.census.gov/quickfacts/longbeachcitycalifornia>, accessed May 2020.

<sup>18</sup> Long Beach Police Department, Patrol Bureau, <http://www.longbeach.gov/police/about-the-lbpd/bureaus/patrol-bureau/>, accessed May 2020.

<sup>19</sup> City of Long Beach General Plan, Land Use Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/advance/lueude/land-use-element-final-adopted-december-2019>, accessed May 2020.

iii. Schools?

The Project Site is served by Long Beach Unified School District (LBUSD). LBUSD operates 85 facilities serving grade levels pre-K through high school and has a current enrollment of 72,000 students.<sup>20</sup> Schools serving the Project Sites include Los Cerritos Elementary School, located at 515 West San Antonio Drive, which serves grades K through 5th, Hughes Middle School, located at 3846 California Avenue, which serves grades 6th through 8th, and Polytechnic High School, located at 1600 Atlantic Avenue, which serves grades 9th through 12th.<sup>21</sup>

As show in **Table VI-1: Students Generated by The Project**, generation factors from the Long Beach Unified School District Residential Development School Fee Justification Study were used to calculate the number of students that would be generated by the 226 new single-family attached and detached homes proposed.<sup>22</sup>

As shown in **Table VI-2: Projected Student Enrollment from Future Single-Family Units (2035)**, projected student enrollment for calendar year 2035. **Table VI-3: Existing School Facilities Capacity and Student Enrollment** shows enrollment for schools in the City is currently below capacity.<sup>23</sup>

**Table VI-1  
Students Generated by the Project**

School Level	School Students
Elementary School	45
Middle School	24
High School	33
<i>Total</i>	<i>102</i>

Source: Long Beach Unified School District, Residential Development School Fee Justification Study (2018).

20 Long Beach Unified School District, About, [www.lbschools.net/District/](http://www.lbschools.net/District/), accessed May 2020.

21 Long Beach Unified School District, School Finder, [https://www.lbschools.net/Schools/school\\_finder\\_results\\_streets.cfm](https://www.lbschools.net/Schools/school_finder_results_streets.cfm), accessed May 2020.

22 Long Beach Unified School District, Residential Development School Fee Justification Study, [http://www.lbschools.net/Asset/Files/Business\\_Services/Developer\\_Fees/2018/2018-Residential-Fee-Justification-Study.pdf](http://www.lbschools.net/Asset/Files/Business_Services/Developer_Fees/2018/2018-Residential-Fee-Justification-Study.pdf), accessed May 2020.

23 Long Beach Unified School District, Residential Development School Fee Justification Study, [http://www.lbschools.net/Asset/Files/Business\\_Services/Developer\\_Fees/2018/2018-Residential-Fee-Justification-Study.pdf](http://www.lbschools.net/Asset/Files/Business_Services/Developer_Fees/2018/2018-Residential-Fee-Justification-Study.pdf), accessed May 2020.

**Table VI-2**  
**Projected Student Enrollment from Future Single-Family Units (2035)**

School Level	Projected Student Enrollment
Elementary School	1,302
Middle School	687
High School	939
<i>Total</i>	<i>2928</i>

Source: Long Beach Unified School District, Residential Development School Fee Justification Study (2018).

**Table VI-3**  
**Existing School Facilities Capacity and Student Enrollment**

School Level	2017/2018 Facilities Capacity	2017/2018 Student Enrollment	Excess/ (Shortage) Capacity
Elementary School	44,779	40,138	4,641
Middle School	13,776	11,274	2,502
High School	23,750	23,165	585
<i>Total</i>	<i>82,305</i>	<i>74,577</i>	<i>7,728</i>

Source: Long Beach Unified School District, Residential Development School Fee Justification Study (2018).

As such, the Project would generate 1.8 percent of the remaining capacity of 4,641 elementary school students, 1.0 percent of the remaining capacity of 2,502 middle school students, and 5.6 percent of the remaining capacity of 585 high school students.

Therefore, the incremental increase in the number of students generated by the Project would not result in the need for new or physically altered school facilities as sufficient capacity is available. Impacts to the existing school system would be less than significant and no mitigation measures is needed.

#### iv. Parks?

Recreational amenities in the City of Long Beach include 170 parks and 26 community centers, providing more than 3,100 acres of recreational space.<sup>24</sup> Based on a population of 462,628 residents, the City's current parkland ratio is approximately 6.7 parkland acres per 1,000 residents. As stated in the City's

<sup>24</sup> Long Beach Parks, Recreation, and Marine, About the Department, <http://www.longbeach.gov/park/business-operations/about/>, accessed May 2020.

General Plan Open Space and Recreation Element, the City of Long Beach's goal for providing adequate park and recreational facilities to its residents is 8 acres per 1,000 residents.<sup>25</sup>

The Project would generate an estimated 624 residents and would incrementally increase the demand for usage of existing parks in the City. The Project proposes to include 5-acres of open space that would include walking trails, look-out points, an open grass area that can accommodate a youth soccer field, a butterfly garden, and exercise equipment, which would offset some demand on park and recreational facilities in the City. Additionally, in accordance with the Quimby Act, the City assesses open space development fees for new residential development. Pursuant to Chapter 18.18 of the LBMC, all residential development are required to pay a park fees prior to the issuance of a certificate of occupancy. This fee is intended to be used for the acquisition, improvement, and expansion of public parks and/or recreational facilities. Pursuant to Chapter 18.18.100 of the LBMC, any applicant who contributes improvements to the City for the acquisition of park land or the construction of recreation improvements, may be eligible for a credit for such contribution against the park fee otherwise due. With the open space and recreational facilities included in the Project and payment of park fees as required, impacts to park facilities would be less than significant.

**v. Other public services?**

Implementation of the Project would increase the local population by approximately 624 residents. The Project would contribute incrementally toward impacts to City public services and facilities such as public parks, solid waste disposal, discussed in Section 19, Utilities and Service Systems, water usage and wastewater disposal, discussed in more detail in Section 19, Utilities and Service Systems, and libraries. With respect to storm drain usage, discussed in Section 10, Hydrology and Water Quality, the Project would not increase impervious surfaces, as such, a less than significant impact to storm drains would occur. Nevertheless, the Project's contribution would be offset through payment of fees that are used to fund school facility expansions and other public utility services, as well as by the Project specific features incorporated to minimize Project related impacts analyzed in this document.

The Project would be served by the Dana Neighborhood Library, located at 3680 Atlantic Avenue, approximately 1.1 miles northeast of the Project Site. The Dana Neighborhood Library opened in September 1958 and includes a 6,800-sq. ft. facility. Library amenities include public computers, free wifi, wireless printing, copier, community meeting room, family learning center, air conditioning, and exterior book drop for after-hours returns. In addition, the City opened the new Michelle Obama Neighborhood Library in 2016. The new library encompasses 24,655 square-foot of space with its single-story facility and has three public community meeting spaces including areas for children, teens, and adults. Therefore,

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25 Long Beach, General Plan, Open Space and Recreation Element, <http://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/open-space-and-recreation-element>, accessed May 2020.

increased demand on other public resources would be nominal, and the addition of the Michelle Obama Library would continue to accommodate the needs of the residents. Overall, impacts to other public facilities would be less than significant.

## Wildfire

If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:

**a) Threshold: Substantially impair an adopted emergency response plan or emergency evacuation plan?**

Wildland fire protection in California is the responsibility of either the local government, State, or the federal government. State Responsibility Areas (SRA) are the areas in the state where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. The SRA forms one large area over 31 million acres to which the California Department of Forestry and Fire Protection (CAL FIRE) provides a basic level of wildland fire prevention and protection services.

Local responsibility areas (LRA) include incorporated cities, cultivated agriculture lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government.<sup>26</sup> LBFD provides fire protection and emergency medical services to the County. CAL FIRE uses an extension of the SRA Fire Hazard Severity Zone model as the basis for evaluating fire hazard in LRAs. The local responsibility area hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area. Fire Hazard Severity Zones (FHSZ) are identified by Moderate, High and Very High in an SRA, and Very High in an LRA. The Project Site is not in or near an SRA or LRA or lands classified as FHSZ. The nearest FHSZ is approximately 6.9 miles to the southwest at Rolling Hills Estates.<sup>27</sup>

As such, the Project would not impair an adopted emergency response plan or emergency evacuation plan and no impacts would occur, no mitigation measure is required.

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26 CALFIRE, Fire Hazard Severity Zones Maps, <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>, accessed May 2020.

27 CALFIRE, FHSZ Viewer, <https://egis.fire.ca.gov/FHSZ/>, accessed May 2020.

- b) Threshold: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

As previously discussed, the Project Site is not in or near an SRA or LRA or lands classified as FHSZ.<sup>28</sup> As such, slope, prevailing winds, or other factors would not exacerbate wildfire risks or contribute toward the uncontrolled spread of a wildfire and no impact would occur, no mitigation measure is required.

- c) Threshold: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

The Project Site is not in or near an SRA or LRA or lands classified as FHSZ.<sup>29</sup> While development would involve infrastructure improvements along streets adjacent to the Project Site, improvements would not be located in or near wildfire areas. Therefore, the Project would not require additional roads, fuel breaks, emergency water sources, power lines or other utilities that would exacerbate fire risk and no temporary or ongoing impacts to the environment would occur. The project would have no impacts on installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment, no mitigation measures is required.

- d) Threshold: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

The Project Site is not in or near an SRA or LRA or lands classified as FHSZ.<sup>30</sup> Therefore, development would not expose people or structures downslope or downstream from the Project Site to substantial risks resulting from wildfires, such as flooding or landslides. No impact would occur and no mitigation measures would be required.

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28 CALFIRE, FHSZ Viewer, <https://egis.fire.ca.gov/FHSZ/>, accessed May 2020.

29 CALFIRE, FHSZ Viewer, <https://egis.fire.ca.gov/FHSZ/>, accessed May 2020.

30 CALFIRE, FHSZ Viewer, <https://egis.fire.ca.gov/FHSZ/>, accessed May 2020.

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