DRAFT ENVIRONMENTAL IMPACT REPORT

STATE CLEARINGHOUSE NO. 2022020416

FIRE STATION NO. 9 AT 4101 LONG BEACH BOULEVARD

CITY OF LONG BEACH

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that local government agencies, before taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report (EIR) is a public document designed to provide both the public and local and State governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This Executive Summary has been prepared according to *State CEQA Guidelines* Section 15123 for the Draft EIR for the proposed Fire Station No. 9 at 4101 Long Beach Boulevard Project (proposed project). This Draft EIR has been prepared for the City of Long Beach (City) to analyze the proposed project's potential impacts on the environment; to propose mitigation measures for identified potentially significant impacts that would minimize, offset, or otherwise reduce or avoid those environmental impacts; and to discuss alternatives that could reduce the potentially significant impacts of the proposed project.

1.2 SUMMARY OF LOCATION AND SETTING

The proposed project would be located on an approximately 0.4-acre site (project site) in Long Beach, which is located in the southern region of Los Angeles County, California.

The project site is comprised of two parcels: Assessor's Parcel Number (APN) 7139-015-017 and APN 7139-015-010. Regional access to the project site is provided by Interstates 405 (I-405) and 710 (I-710), which are located approximately 1.2 miles south and 2.0 miles west of the project site, respectively. Local access to the project site is provided by Long Beach Boulevard and Randolph Place.

Surrounding land uses include single-family residential uses to the northwest and west, a coffee shop and retail stores directly to the north, multi-family residential uses and office uses to the east across Long Beach Boulevard, and office uses to the south. In the existing condition, the project site is developed with an approximately 5,000 square-foot (sf) single-story office building and related parking and landscaping. The building is currently occupied by Catalina Adventure Tours and would be demolished as part of the proposed project. Access is currently provided to the project site from Long Beach Boulevard to the east and from Randolph Place to the south.

1.3 SUMMARY OF PROJECT DESCRIPTION

The project site encompasses approximately 0.4 acre and includes development of a 12,780 sf two-story fire station. The proposed project involves the demolition of the existing 5,000 sf office building occupied by Catalina Adventure Tours. The existing office building, landscaping, and associated parking comprise the entire project site. Also included in the proposed project are associated infrastructure improvements necessary to facilitate pedestrian and vehicular access to and from the project site, landscaping improvements, and utility upgrades. Refer to Figure 3.4,

Preliminary Conceptual Site Plan, in Chapter 3.0, Project Description, of this EIR, for the location of the proposed improvements on the project site.

The proposed project would include associated parking areas, a trash enclosure, power transformer, landscaping, fencing, gates, and driveways. Vehicular access to a secured firefighter parking area would be provided through the alley on the northern side of the project site. This parking area would also include an exit-only driveway onto Long Beach Boulevard, with a right-turn only restriction. The parking lot would include a total of 11 parking spaces, including one Americans with Disabilities Act (ADA)-compliant space. Firefighting and emergency medical response vehicles would exit the project site via a driveway off Randolph Place, with new emergency traffic signals installed adjacent to the fire station on Long Beach Boulevard and Randolph Place to hold traffic for exiting apparatus. The fire station's main public entrance, including an ADA-accessible ramp, would be located on Long Beach Boulevard. The proposed project's landscaping would include drought-tolerant plants and low-flow irrigation systems.

Off-site improvements would include a new driveway apron from the proposed parking lot to Long Beach Boulevard. The sidewalks along the Long Beach Boulevard and Randolph Place frontages would be replaced and the existing street trees protected in place or relocated, as necessary. As noted above, three new emergency-only traffic signals that could be activated from the fire station would be installed at the intersection of Randolph Place and on Long Beach Boulevard to allow a clear response path onto Long Beach Boulevard. A response driveway would be installed from the fire station to Randolph Place, with "Keep Clear" zones striped in front of the apparatus bay on Randolph Place and in the Long Beach Boulevard/Randolph Place intersection. The alley on the north side of the project site would be widened and reconstructed with underground utilities and new pavement.

See Chapter 3.0, Project Description, for a complete description of the project components.

1.4 SIGNIFICANT UNAVOIDABLE IMPACTS

As described in Chapter 4.0, Existing Environmental Setting, the proposed project would not result in significant unavoidable adverse impacts. Also, Chapter 4.0 includes proposed mitigation measures for potentially significant impacts for cultural resources; noise; and tribal cultural resources to ensure that no significant, adverse effects on the environment would occur. In addition, the project would have no impacts related to agricultural and forestry resources and wildfire.

1.5 ALTERNATIVES

Section 21100 of the Public Resources Code and Section 15126.6 of the *State CEQA Guidelines* require an EIR to identify and discuss a no project alternative and a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the proposed project and would avoid or substantially lessen any of the significant environmental impacts. Based on the criteria listed above, the No Project Alternative is the only reasonable alternative as discussed further below. CEQA requires analysis of a "No Project" alternative. The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.

According to *State CEQA Guidelines* Section 15126.6(e)(3)(C), the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

The following variations of the No Project Alternative were selected for consideration:

1.5.1 Alternative 1: No Project Alternative – Current Lease Term

The Alternative 1: No Project Alternative – Current Lease Term would involve no changes to the existing land uses and conditions on the project site. Under this alternative, no new development on the project site would be proposed, and therefore, no development would occur and the existing project site would remain in its current condition. The Alternative 1: No Project Alternative would allow for the existing project site to remain developed with the 5,000 sf office building into the foreseeable future. Under this variation of the No Project Alternative, the existing temporary Fire Station No. 9 at 2019 Wardlow Road would remain in place until the end of the existing lease term, which is allocated for a maximum of 3 years.

1.5.2 Alternative 2: No Project Alternative – Temporary Fire Station Location Made Permanent

The Alternative 2: No Project Alternative – Temporary Fire Station Location Made Permanent would make the temporary location of Fire Station No. 9 at 2019 Wardlow Road a permanent location. This alternative would involve no changes to the existing land uses and conditions on the project site. Under this alternative, no new development on the project site is proposed, and therefore, no development would occur and the project site would remain in its current condition. Similar to Alternative 1, this variation of the No Project Alternative would allow for the project site to remain developed with the existing 5,000 sf office building and associated infrastructure into the foreseeable future. Under this alternative, the existing temporary Fire Station No. 9 at 2019 Wardlow Road would have to undergo a lease extension or a purchase and sale agreement to make the temporary fire station permanent.

1.5.3 Environmentally Superior Alternative

Both of the No Project Alternatives would be environmentally superior to the proposed project on the basis of the reduced physical impacts that would occur with these alternatives. Neither alternative would require the construction and operation of the fire station included in the proposed project. Alternative 2 would be environmental superior as it has reduced physical impacts as compared to the proposed project and the potential to provide a permanent long-term fire station. However, Alternative 2 would result in a fire station outside of the Fire Station No. 9 service area, and the current lease from a private property owner would not guarantee the permanent provision of fire facilities. Further, Alternative 2 would meet only some of the Project Objectives: providing a fire facility in compliance with National Fire Prevention Association (NFPA) standards and adequate space for fire apparatus. However, these Project Objectives would only be met if the temporary fire station facility could be secured as a permanent location, and if the fire service area

maps could be revised in a manner that would continue to ensure adequate fire services to the City's population.

1.6 AREAS OF CONTROVERSY

Pursuant to *State CEQA Guidelines* Section 15123, this EIR acknowledges the areas of controversy and issues to be resolved that are known to the City or that were raised during the scoping process. A Notice of Preparation (NOP) for an EIR was circulated and public comments on the Initial Study were solicited for a period of 32 days, starting on February 18, 2022, and ending on March 22, 2022. A scoping meeting was held on March 9, 2022. Major issues and concerns raised during the NOP process included: (1) suggestions from the Native American Heritage Commission (NAHC) for compliance with Senate Bill 18 and Assembly Bill 52; (2) recommendations from Caltrans District 7 to reference the City of Long Beach Traffic Impact Analysis Guidelines, acquire appropriate permits, and follow preferred traffic safety mitigation; (3) concerns regarding the reduction in on-street parking; (4) concerns regarding noise impacts from fire engine siren use and testing; (5) concerns regarding vehicular access safety; and (6) concerns regarding the potential for increased traffic congestion. Please note that these are not exhaustive lists of areas of controversy but rather key issues that were raised during the scoping process and public review period for the Draft EIR.

This Draft EIR addresses each of these areas of concern or controversy in detail, examines project-related and cumulative environmental impacts, identifies significant adverse environmental impacts, and proposes mitigation measures designed to reduce or eliminate potentially significant impacts of the proposed project.

1.7 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 1.A, below, identifies the potential environmental impacts, proposed mitigation measures, and level of significance after mitigation is incorporated into the proposed project. Table 1.A also identifies cumulative impacts resulting from the proposed project. Environmental topics addressed in this Draft EIR include, Air Quality, Cultural Resources, Energy, Greenhouse Gas Emissions, Land Use and Planning, Noise, Transportation, and Tribal Cultural Resources.

Refer to Chapter 2.0, Introduction, of this Draft EIR for a discussion of additional effects found not to be significant through the NOP process (e.g., Aesthetics, Agricultural Resources, Biological Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality Mineral Resources, Population and Housing, Public Services, Recreation, Utilities and Service Systems, and Wildfire).

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
4.1: Air Quality		
Threshold 4.1.1: Would the project conflict with or obstruct implementation of the applicable air quality plan? **Less Than Significant Impact.** The proposed project would not conflict with or obstruct the implementation of the air quality plans prepared by the South Coast Air Quality Management District (SCAQMD) to attain State and national air quality standards or reduce violations of any air quality standard. As such, the proposed project would result in a less than significant impact related to a conflict or obstruction of implementation of applicable air quality plans.	No mitigation is required.	Less Than Significant Impact.
Threshold 4.1.2: 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? **Less Than Significant Impact.** Construction of the proposed project would not result in any exceedances of any criteria pollutant. In addition, construction equipment/vehicle emissions during construction periods would not exceed any of the SCAQMD established daily emissions thresholds for which the project region is nonattainment under the California ambient air quality standards (CAAQS) or national ambient air quality standards (NAAQS). Compliance Measures AQ-1 through AQ-4 require compliance with SCAQMD standard conditions, including Rule 402 (Nuisance) to control nuisance emissions, Rule 403 (Fugitive Dust) to control fugitive dust, and Rule 1113 (Architectural Coatings) to control volatile organic compound (VOC) emissions from paint. Compliance with SCAQMD standard conditions are regulatory requirements, not mitigation, and were considered in the analysis of construction emissions. Therefore, the proposed project would not exceed the SCAQMD construction emissions thresholds, and short-term	No mitigation is required. **Compliance Measure AQ-1. SCAQMD Rule 403.** During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventative measures by using the following procedures, in compliance with South Coast Air Quality Management District (SCAQMD) Rule 403 during construction. The applicable Rule 403 measures are as follows: • Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more). • Water active sites at least twice daily (locations where grading is to occur shall be thoroughly watered prior to earthmoving). • Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet (0.6 meter) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section	Less Than Significant Impact.

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Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
(construction) air quality impacts would be less than significant. The net increased emission results during operation of the proposed project would not exceed the corresponding SCAQMD daily emission thresholds for any criteria pollutants. While the project would result in the increased emissions of criteria pollutants, emissions during operation of the proposed project would not exceed the thresholds of significance for any criteria pollutants for which the project region is nonattainment under State or federal ambient air quality standards (CAAQS or NAAQS, respectively). Therefore, operational emissions for the proposed project would have a less than significant impact.	23114. • Pave construction access roads at least 100 feet (30 meters) onto the site from the main road. • Reduce traffic speeds on all unpaved roads to 15 miles per hour or less. **Compliance Measure AQ-2.** All trucks that are to haul excavated or graded material shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads. **Compliance Measure AQ-3.** Prior to approval of the project plans and specifications, the City shall confirm that the construction bid packages specify: • Contractors shall use high-volume low-pressure paint applicators with a minimum transfer efficiency of at least 50 percent; • Coatings and solvents that will be utilized have a volatile organic compound content lower than required under SCAQMD Rule 1113; and • To the extent feasible, construction/building materials shall be composed of pre-painted materials. **Compliance Measure AQ-4.** The project shall comply with SCAQMD Rule 402. Rule 402 prohibits the discharge of air contaminants or other material from any type of operations, which can cause nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort or repose of any such persons, or the public.	

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Threshold 4.1.3: Would the project expose sensitive receptors to substantial pollutant concentrations? **Less Than Significant Impact.** Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement measures to reduce or eliminate emissions by following SCAQMD rules for standard construction practices (Compliance Measures AQ-1 through AQ-4). Therefore, once the project is constructed, the project would not be a source of substantial pollutant emissions, and sensitive receptors would not be exposed to substantial pollutant concentrations during either project construction or operation. As such, impacts would be considered less than significant.	No mitigation is required. Refer to Threshold 4.1.2 above for Compliance Measures AQ-1 through AQ-4.	Less Than Significant Impact.
Cumulative Air Quality Impacts. **Less Than Significant Impact.** Air pollution is inherently a cumulative type of impact measured across an air basin. The incremental effect of projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively considerable. The proposed project's construction- and operation-related regional daily emissions are less than the SCAQMD significance thresholds for all criteria pollutants. In addition, adherence to SCAQMD rules and regulations would substantially reduce potential impacts associated with South Coast Air Basin-wide air pollutant emissions. Therefore, the proposed project would not have a cumulatively considerable increase in emissions, and the proposed project's cumulative air quality impacts would be less than significant.	No mitigation is required. Refer to Threshold 4.1.2 above for Compliance Measures AQ-1 through AQ-4.	Less Than Significant Impact.
4.3: Cultural Resources		
Threshold 4.2.2: Would the project cause a substantial adverse change in the significance of an archaeological resource	**Mitigation Measure CUL-1. Archaeological Site Monitoring.** An archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards for	Less Than Significant Impact

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Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
pursuant to §15064.5? **Less Than Significant Impact with Mitigation Incorporated.** No previously recorded archaeological deposits or human remains were identified on or within the project site. Additionally, no cultural resources have been previously recorded in the project site or within 0.25 mile of the project. A field survey was not conducted because the project site is fully developed, and any artifacts identified in planters would not be in their original context. The earliest available aerial photograph dates to 1953, at which time the project site was already disturbed and developed with a building. The project site is in close proximity to the natural alignment of the Los Angeles River and a natural marshland, which both would have been utilized by Native American and historic-period populations as a water and food source. As discussed above, the project site was developed prior to 1953. Therefore, there is potential for subsurface historic-period deposits associated with the original development of the project site. As identified in the Archaeological Resources Memorandum, the project site is considered moderately sensitive for subsurface archaeological resources. With incorporation of Mitigation Measure CUL-1, potential significant impacts to archaeological resources would be reduced to a less than significant level.	archaeology shall oversee archaeological monitoring of construction-related ground disturbance. Monitoring shall continue until the archaeologist determines that there is a low potential for encountering subsurface archaeological, cultural, or tribal cultural resources. In the event that archaeological cultural resources are identified by the archaeological monitor during ground-disturbing project activities, the nature of the find shall be assessed, and the project archaeologist shall determine if additional cultural resources work is appropriate. Additional cultural resources work may include, but is not limited to, collection and documentation of artifacts, documentation of the cultural resources on State of California Department of Parks and Recreation (DPR) Series 523 forms, or subsurface testing. Upon completion of any cultural resources work for the project, the archaeologist shall prepare a report to document the methods and results of the work. This report shall be submitted to any descendant community involved in the investigation(s) and the South Central Coastal Information Center (SCCIC).	
Cumulative Cultural Resources Impacts. **Less Than Significant Impact.** The proposed project would not have an impact on historical resources. Potential impacts of the proposed project to unknown archaeological resources, when combined with the impacts of past, present, and reasonably foreseeable projects in the City of Long Beach, could contribute to a cumulatively significant impact due to the overall loss of archaeological resources unique to the region. However, each discretionary development proposal received by the City is	Refer to Threshold 4.2.2 above for Mitigation Measure CUL-1.	Less Than Significant Impact.

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Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
required to undergo environmental review pursuant to CEQA. If there were any potential for significant impacts to archaeological resources associated with specific projects in the cumulative impact area, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. When archaeological resources are assessed and/or protected as they are discovered, impacts to these resources are considered less than significant. The proposed project would have a less than significant impact related to unknown cultural resources with implementation of Mitigation Measure CUL-1. As such, the proposed project, in conjunction with other development in the City, would not result in a significant cumulative impact to unique archaeological resources and previously undiscovered buried human remains.		
4.3: Energy		
Threshold 4.3.1: Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? **Less Than Significant Impact.** The proposed project would generate 42 net new average daily trips in the immediate vicinity of the project site, and total citywide vehicle trips would not be increased as these trips are already occurring at the temporary Fire Station No. 9 location. Therefore, the proposed project would not result in an increase in gasoline or diesel fuel consumption during project operation. The estimated electricity demand associated with the operation of the proposed project is 136,711 kilowatt-hours (kWh) per year. Total electricity demand in Los Angeles County in 2020 was approximately 65,650 gigawatt-hours (GWh) (65,649,878,013 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Los Angeles County by less than 0.01	No mitigation is required.	Less Than Significant Impact.

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Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
percent. Further, electricity consumption is currently occurring at the temporary Fire Station No. 9 location, which would be replaced by the proposed project. Electrical and natural gas demand associated with project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would replace an older fire station with a more energy efficient building. The project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The project would be required to adhere to all federal, State, and local requirements for energy efficiency, which would substantially reduce energy usage. Impacts would be considered less than significant.		
Threshold 4.3.2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? **Less Than Significant Impact.** Energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County of Los Angeles. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in the County and to the State's available energy resources. Further, the proposed project would replace the energy usage occurring at the temporary Fire Station No. 9 location. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the California Energy Commission's (CEC) Integrated Energy Policy Report. The proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy. Potential impacts related to conflict with or obstruction of a State or local plan for	No mitigation is required.	Less Than Significant Impact.

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Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
renewable energy or energy efficiency would be less than significant.		
Cumulative Energy Impacts. **Less Than Significant Impact.** The proposed project would result in an increased services demand in electricity and natural gas, although this demand is already occurring at the temporary Fire Station No. 9 location, which would be replaced by the proposed project. The proposed project would not require Southern California Edison (SCE) to expand or construct infrastructure that could cause substantial environmental impacts. Similarly, additional natural gas infrastructure is not anticipated due to cumulative development. During construction activities, transportation energy use would increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development and to the total number of vehicle trips and vehicle miles traveled (VMT) throughout Los Angeles County and the region. Once operational, the proposed project would not increase transportation energy use. Therefore, the proposed project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable, and no mitigation is required.	No mitigation is required.	Less Than Significant Impact.
4.4: Greenhouse Gas Emissions		
Threshold 4.4.1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? **Less Than Significant Impact.** Using the California Emissions Estimator Model (CalEEMod), it is estimated that the project would generate 217.1 metric tons of carbon dioxide equivalent (MT CO_2e) during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 7.2 MT CO_2e. According to SCAQMD, a project would have less	No mitigation is required.	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
than significant greenhouse gas (GHG) emissions if it would result in operational-related GHG emissions of less than 2,520 MT CO_2e per year. Based on the analysis results, the proposed project would result in 60.9 MT CO_2e per year, which would be well below the numeric threshold of 2,520 MT CO_2e per year. Therefore, impacts related to operational GHG emissions would be less than significant.		
Threshold 4.4.2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? **Less Than Significant Impact.** The proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in Assembly Bill (AB) 32, the AB 32 Scoping Plan, Executive Order (EO) B-30-15, Senate Bill (SB) 32, and AB 197 and would be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, impacts would be considered less than significant. The proposed project would not conflict with the goals of the Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); therefore, the proposed project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035, and it can be assumed that regional mobile emissions will decrease in line with the goals of the RTP/SCS. Therefore, impacts related to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions would be less than significant.		Less Than Significant Impact.
Cumulative Greenhouse Gas Emissions Impacts. **Less Than Significant Impact.** The analysis of impacts related to GHG emissions is inherently cumulative. The proposed project would have no conflict with applicable statewide and regional climate action measures. In addition, as discussed above, the	No mitigation is required.	Less Than Significant Impact.

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Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
project's operational-related GHG emissions would not exceed the SCAQMD's numeric threshold. Therefore, GHG emissions impacts associated with the proposed project would be less than significant, and therefore the cumulative impact would also be less than significant.		
4.5: Land Use and Planning		
Threshold 4.5.2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? **Less Than Significant Impact.** **Southern California Association of Governments (SCAG) Regional Comprehensive Plan (RCP).** There are no environmentally sensitive habitat areas on or adjacent to the project site. Therefore, RCP Goals 2, 3, 4 and 6 are not applicable to the proposed project. The project would be consistent with RCP Goal 1 to focus growth along major transportation corridors. The proposed project would not interfere or conflict with the existing land use patterns and visual character of established residential neighborhoods near the site and would not result in any potentially significant nuisance impacts. Therefore, the project would be consistent with RCP Goal 5 of preserving existing single-family neighborhoods. Compliance with Compliance Measures HYD-1 and HYD-2, as provided in Chapter 2.0, Introduction, would ensure that impacts related to violation of any water quality standards or waste discharge requirements, and degradation of surface water or groundwater quality during project construction and operation would be less than significant. Therefore, the proposed project would be consistent with applicable goals and policies in the SCAG's 2008 RCP. **General Plan Consistency.** The project site is comprised of two	No mitigation is required.	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
parcels that carry two different General Plan PlaceType designations. The proposed project would merge the parcels and includes a General Plan Amendment (GPA) to implement a consistent PlaceType of Neighborhood Serving Center or Corridor Low Density (NSC-L) on the entire project site. As stated in the General Plan Land Use Element, the development of a fire station is consistent with the permitted uses allowed under the NSC-L PlaceType designation. Therefore, impacts related to potential conflicts with the City of Long Beach's (City) General Plan are anticipated to be less than significant. **Long Beach Zoning Code**. The project site is comprised of two parcels that carry two different zoning classifications: Community Commercial Automobile-Oriented (CCA) and Single-Family Residential, Large Lot (R-1-L). The proposed project would merge the subject parcels and rezone them to a Mixed Use (MU-1) zoning designation, which is compatible with the NSC-L PlaceType. Therefore, approval of the General Plan Amendment and Zoning Amendment would ensure the proposed project's consistency with the City's established development standards, and no mitigation would be required.		
Cumulative Land Use and Planning Impacts. **Less Than Significant Impact.** There are no incompatibilities between the proposed project and planned future projects in the City, which primarily include mixed-use and residential developments. Proposed projects in the City would be reviewed for consistency with adopted land use plans and policies by the City. For this reason, current and future projects are anticipated to be consistent with applicable General Plan and zoning requirements or would be subject to allowable exceptions. Further, each discretionary project would be subject to CEQA, mitigation requirements, and design review, as applicable. Therefore, the proposed project would not contribute a	No mitigation is required.	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
significant cumulative land use compatibility impact in the City.		
4.6: Noise		
Threshold 4.6.1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? **Construction Noise.** **Less Than Significant Impact.** The proposed project would comply with the requirements of the City of Long Beach (City) Noise Ordinance, which would ensure that construction noise does not disturb nearby residents during typical sleeping hours or during hours when ambient noise levels are likely to be lower. Although construction noise would be higher than the ambient noise in the project vicinity, construction noise would cease once project construction is completed. In addition, the proposed project would implement several best practices for reducing construction noise, including, but not limited to, maximizing the distance between noise sources and sensitive receptors during construction activities, equipping construction equipment with properly operating and maintained noise mufflers, and establishing a noise disturbance coordinator for the proposed project. These best practices are included in Compliance Measure NOI-1. Therefore, with implementation of Compliance Measure NOI-1, construction activity noise impacts would be less than significant, and no mitigation is required. **Operational Noise.** **Less Than Significant with Mitigation Incorporated.** The proposed project would include heating, ventilation, and air conditioning (HVAC) equipment. The proposed project also includes an emergency generator for the fire station; however, it would be located within the building for sound attenuation	**Mitigation Measure NOI-1: HVAC Equipment.** Prior to issuance of construction permits, the City of Long Beach (City) Director of Community Development, or designee, shall verify that that the approved plans indicate that mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC]) shall have a combined sound rating of less than 76 A-weighted decibels (dBA) when measured at 5 feet (ft) to assure compliance with the City's Noise Ordinance. **Compliance Measure NOI-1: Construction Noise and Vibration.** Prior to issuance of building permits, the City of Long Beach (City) Director of Community Development Department, or designee, shall verify that grading and construction plans include the following requirements: • Ensure that the greatest distance between noise sources and sensitive receptors during construction activities has been achieved. • Construction equipment, fixed or mobile, shall be equipped with properly operating and maintained noise mufflers consistent with manufacturers' standards. • Construction staging areas shall be located away from off-site sensitive uses during the later phases of project development. • The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site whenever feasible. • The construction contractor shall use on-site electrical sources to power equipment rather than diesel generators where feasible.	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
and is not expected to generate any noise to surrounding uses. Additionally, the proposed project would generate noise related to sirens when responding to emergency calls. A typical siren emits approximately 100 decibels (dB) at 100 feet (ft). It is likely that sirens would not be sounded until the truck reaches Long Beach Boulevard. Because emergency vehicle response is by nature rapid, the duration of exposure to these peak noise levels is estimated to last for a maximum of ten seconds. Due to the short-term nature of the siren noise, and because the City's Municipal Code Section 8.80.250 exempts emergency operations, this impact would be considered less than significant. Primary HVAC equipment would be located on the rooftop of fire station and would be shielded by a mechanical screen. Should the project install HVAC equipment that when combining 4 units as proposed has a noise level rating of 75 A-weighted decibels (dBA) or higher when measured at 5 ft without adequate noise shielding, a potentially significant impact would occur. With implementation of Mitigation Measure NOI-1, the noise level impacts from the proposed HVAC systems would be reduced to less than the existing quietest nighttime noise levels and, therefore, would be reduced to a less than significant level. The results indicate that the increase in noise associated with project-related traffic would be very small, ranging from 0.0 to 0.5 dBA along the segments analyzed. These noise level increases are not perceptible by the human ear; therefore, off-site traffic noise impacts would be less than significant.	• All residential units located within 300 feet (ft) of the construction site shall be sent a notice regarding the construction schedule. A sign, legible at a distance of 50 ft, shall also be posted at the construction site. All notices and the signs shall indicate the dates and duration of construction activities, as well as provide a telephone number for the "noise disturbance coordinator." • A "noise disturbance coordinator" shall be established. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures to reduce noise levels. All notices that are sent to residential units within 300 ft of the construction site and all signs posted at the construction site shall list the telephone number for the disturbance coordinator.	
Threshold 4.6.2: Generation of excessive groundborne vibration or groundborne noise levels? **Less Than Significant with Mitigation Incorporated.** It is expected that construction activities utilizing heavy equipment	**Mitigation Measure NOI-2: Construction Vibration Damage.** Due to the close proximity to surrounding structures, the construction contractor shall implement the following mitigation measures during project construction activities to ensure that damage does not	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
would generate vibration levels greater than 0.2 inches per second (in/sec) in peak particle velocity (PPV) when operating within 5 ft of the property line. At these close distances, construction-related vibration could be potentially significant. Mitigation Measure NOI-2 requires the construction contractor to implement several measures, including developing a vibration monitoring and construction contingency plan to ensure that damage does not occur at surrounding structures. Loaded trucks and other similar equipment used for a project this size would generate levels approaching to 99 vibration velocity decibels (VdB) of ground-borne vibration when construction occurs within 10 ft of the residences to the west. As with any type of construction, vibration levels during any phase may at times be perceptible. However, construction phases that have the highest potential of producing vibration would be intermittent and would only occur for short periods of time for any individual project site. By use of best practices, such as scheduling construction activities with the highest potential to produce perceptible vibration to hours with the least potential to affect nearby properties and the incorporation of Mitigation Measure NOI-2, perceptible vibration can be kept to a minimum and as such would result in a less than significant impact with respect to perception. This impact would be less than significant.	occur at surrounding structures: • Identify structures that are located within 12 ft of heavy construction activities and that have the potential to be affected by ground-borne vibration. This task shall be conducted by a qualified structural engineer as approved by the City's Director of Community Development or designee. • Develop a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted; set up a vibration monitoring schedule; define structure-specific vibration limits; and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies would be identified for when vibration levels approached the limits. • At a minimum, monitor vibration during initial demolition activities. Monitoring results may indicate the need for more or less intensive measurements. • When vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures. • Conduct post-survey on structures where either monitoring has indicated high levels or complaints of damage have been made.	
Cumulative Noise Impacts. **Less Than Significant Impact.** Cumulative growth within the City could result in temporary or periodic increases in ambient noise levels at development sites throughout the City. However, construction-related noise would be temporary and would no longer occur once construction of individual future projects is completed. In addition, future construction activities would be	No mitigation is required.	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
subject to compliance with the City's Noise Ordinance to ensure that noise impacts from construction sources are reduced. Therefore, the proposed project would not substantially contribute to temporary cumulative construction noise and vibration impacts. A cumulative noise impact would occur if multiple sources of noise from cumulative projects combine to create impacts in close proximity to a sensitive receptor. Operation of the fire station would involve HVAC equipment operations and intermittent siren use, which could be disturbing to nearby residents and businesses. Because the City's Municipal Code Section 8.80.250 exempts emergency operations, and because the proposed fire station is a replacement for the temporary fire station already operating in the area, operational noise impacts are not considered cumulatively significant. Therefore, the proposed project would not be considered to have a cumulatively considerable contribution to the total noise environment in the City.		
4.7: Transportation		
Threshold 4.7.1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? **Less Than Significant Impact.** The proposed project would generate a net 42 average daily trips (ADT), 7 trips (1 inbound and 6 outbound) in the a.m. peak hour and 2 trips (2 inbound and 0 outbound) in the p.m. peak hour. With the addition of the project trips in the existing condition, all the study area intersections would continue to operate at a satisfactory level of service (LOS) D or better. Based on the project typical operations and temporary construction activities, the project is not anticipated to result in any LOS or operational deficiencies to the surrounding circulation system.	No mitigation is required.	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
The project would not make any changes to the public rights-of way in the project vicinity or generate a substantial number of daily or peak-hour vehicle trips for construction or typical operations to warrant modifications to any transportation facilities (e.g., vehicular, transit, bicycle, or pedestrian). Therefore, the project would not conflict with the Mobility Plan 2035. Impacts would be considered less than significant.		
Cumulative Transportation Impacts. **Less Than Significant Impact.** Although a full transportation impact study was not required for the proposed project and cumulative projects were not individually identified, several development projects are approved and/or pending within the City of Long Beach (City). Each of these projects, as well as all proposed discretionary development in the City, would be subject to its own transportation consistency analysis and would be reviewed for consistency with adopted programs, plans, ordinances, or policies addressing the circulation system. For this reason, cumulative impacts associated with inconsistency of future development with adopted programs, plans, ordinances, or policies addressing the circulation system would be less than significant. Therefore, transportation impacts associated with the proposed project would be considered less than cumulatively significant, and no mitigation would be required.	No mitigation is required.	Less Than Significant Impact.
4.8: Tribal Cultural Resources		
Threshold 4.8.1(i): Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register	No mitigation is required.	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
of historical resources as defined in Public Resources Code Section 5020.1(k)? **Less Than Significant Impact.** No tribal cultural resources listed or eligible for listing in the California Register of Historical Resources (California Register) or in a local register exist within the project site, and there are no known tribal cultural resources on the project site. The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource defined as a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register or in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k), and no mitigation is required. Refer to the Initial Study located in Appendix A and Section 4.2, Cultural Resources, for detailed information regarding the Historic Resources Elevation and the Archaeological Resources Study substantiating that no listed properties or resources exist on the project site.		
Threshold 4.13.1(ii): Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native	**Mitigation Measure TCR-1 Tribal Consultation.** Prior to issuance of a grading permit for the project, the City of Long Beach (City) shall retain both the Gabrieleño Band of Mission Indians—Kizh Nation (Kizh Nation) and the Gabrieliño Tongva Indians of California (GTIOC) to provide Native American tribal monitoring of ground-disturbing activities. Ground-disturbing work requiring Native American tribal monitoring shall adhere to the following requirements established by the consulting Tribes:. **Gabrieleño Band of Mission Indians—Kizh Nation (Kizh Nation)** 1) KN-1: Retain a Native American Monitor Prior to	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
American tribe. **Less Than Significant Impact with Mitigation Incorporated.** A cultural resources record search, a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC), and Native American consultation per Assembly Bill (AB) 52 and Senate Bill 18 (SB 18) was conducted for the proposed project. The purpose of these efforts was to identify known tribal cultural resources on or near the project site. No cultural resources were identified as part of the records search. However, consultation with the Gabrielino Tongva Indians of California Tribe and Gabrieleno Band of Mission Indians resulted in the proposition of Mitigation Measure TCR-1. Inclusion of Mitigation Measure TCR-1 would ensure potential impacts to tribal cultural resources would be less than significant. Although no human remains are known to be on the project site or are anticipated to be discovered during project construction, there is always a possibility of encountering unanticipated human remains. If human remains are Native American in origin, the remains may be considered a tribal cultural resource. If human remains are encountered, the City of Long Beach (City) is required to comply with Compliance Measure CUL-1, which requires compliance with the State's Health and Safety Code for the treatment of human remains and coordinate with the Native American Heritage Commission and a Most Likely Descendant if the remains are determined to be Native American. Implementation of Compliance Measure CUL-1 and Mitigation Measure TCR-1 would ensure potential impacts to tribal cultural resources would be less than significant.	Commencement of Ground-Disturbing Activities A. The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. B. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to whichever is earlier: the commencement of any ground-disturbing activity or the issuance of any permit necessary to commence a ground-disturbing activity. C. The monitor shall complete daily monitoring logs that provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh Nation. Monitoring logs shall identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively,	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitoring logs shall be provided to the project applicant/ lead agency upon written request to the Kizh Nation. D. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh Nation from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh Nation to the project applicant/lead agency that no future, planned construction activity and/or development/ construction phase at the project site possesses the potential to impact Kizh Nation TCRs. E. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh Nation monitor and/or the Kizh Nation archaeologist. The Kizh Nation shall recover and retain all discovered TCRs in the form and/or manner the Kizh Nation deems appropriate, in the Kizh Nation's sole discretion, and for any purpose the Kizh Nation deems appropriate, including for educational, cultural, and/or historic purposes. 2) KN-2: Unanticipated Discovery of Human Remains	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	and Associated Funerary Objects A. 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 Public Resources Code Section 5097.98, are also to be treated according to this statute. B. If Native American human remains and/or grave goods are discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain 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 they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed. C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code Sections 5097.98(d)(1) and (2). D. Construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or burial goods, if the Kizh Nation determines in its sole	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	discretion that resuming construction activities at that distance is acceptable and provides the project manager express consent of that determination (along with any other mitigation measures the Kizh Nation monitors and/or archaeologist deems necessary) (*State CEQA Guidelines* Section 15064.5(f)). E. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes. F. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance. 3) KN-3: Procedures for Burials and Funerary Remains: A. As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Kizh Nation, 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	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	human remains. B. If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created. C. The prepared soil and cremation soils shall 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. Cremations shall either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials. D. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains shall 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 shall be posted outside of working hours. The Kizh Nation shall 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. E. In the event preservation in place is not possible	

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Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	despite good faith efforts by the project applicant/ developer and/or landowner, before ground-disturbing activities may resume on the project site, 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. F. Each occurrence of human remains and associated funerary objects shall be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony shall be removed to a secure container on site if possible. These items shall be retained and reburied within 6 months of recovery. The site of reburial/ repatriation shall be on the project site but at a location agreed upon between the Kizh Nation and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered. G. The Kizh Nation shall work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Kizh Nation, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery-related forms of documentation shall be approved in advance by the Kizh Nation. If any data recovery is performed, once complete, a final report shall be submitted to the Kizh Nation and the NAHC. The Kizh Nation does not authorize any scientific study or the utilization of any invasive and/or	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	destructive diagnostics on human remains. **Gabrieliño Tongva Indians of California (GTIOC)** 1) GTIOC-1: Native American Monitor A. A qualified and certified indigenous tribal member of the Gabrielino Tongva Indians of California (GTIOC) shall provide professional Native American Monitoring required for the ground-disturbing activity on the site. Ground disturbances including but not limited to the removal of asphalt/cement/ slurry, trenching, boring, excavation, auguring, grubbing, tree removal, grading and drilling shall be monitored. The Tribal Monitor shall only be required on site when these ground-disturbing activities occur. B. The GTIOC monitor shall be responsible for observing all mechanical and hand labor excavations to include paddle scrappers, blade machines, front-end loaders, backhoe, boring and drill operations as well as hydraulic and electric chisels. Associated work using tools such as picks and other non-electric or gasoline tools that are not regarded as mechanical shall be monitored for their soil disturbances. C. Soils that are removed from the work site are considered culturally sensitive and are subject to inspection. These soils whether placed in a dump truck or spots piles are to be inspected. The monitor shall temporarily hold excavations until a determination is made on the sensitivity of the of the soil. If the soils are sensitive, an archaeological monitor shall verify the find and notify the site	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	supervisor. D. The GTIOC monitor may make recommendations during the course of the project when a cultural area has been impacted. The GTIOC monitor shall be authorized to halt or redirect excavation activities to another area as an assessment is made. Both archaeological and GTIOC shall work together to ensure that the area is warranted as being culturally sensitive before a determination is made. Avoidance and directing an alternative route from this culturally sensitive area is highly recommended. E. Any artifacts associated within the site that are not associated with any burials are subject to collection by the designated archaeologist for purposes of data and information vital for their final report. The GTIOC monitor does not collect artifacts for any reason. Unauthorized removal of artifacts will jeopardize sites orientation and successful data recovery. Only a qualified archaeologist shall remove artifacts for their reports. The landowner shall work with the GTIOC monitor to ensure that a proper repository is established. A final report shall be issued to the cultural consultant by the archaeological company. F. It is the sole responsibility of the GTIOC monitor to provide the client with a written daily field report that includes photos of his/her accounting of the soil disturbances of the daily activities. This perspective of the daily activities by the GTIOC monitor shall enhance the information gathered by the field archaeologist. The daily report shall	

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Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	include observations the GTIOC visually observed on the project site at the beginning of each workday (i.e., weather conditions, overnight disturbances). 2) GTIOC-2: Archaeological Survey A. If a culturally sensitive area is identified, an archaeological survey must be completed before any movement of soil (to include hand shoveling, grading or excavation) takes place. The survey must be conducted by a qualified archaeologist who is knowledgeable and experienced in working in the Gabrielino Tongva geographical area. If an archaeologist has little or no experience in the Gabrielino Tongva territory, a qualified, experienced Gabrielino Tongva cultural consultant shall assist in the archaeological survey. 3) GTIOC-3: Treatment Plan for Human Discovery A. If any archaeological or paleontological, or cultural deposits, are discovered, including but not limited to skeletal remains and grave related artifacts, artifacts of traditional cultural, religious, or spiritual sites, or any other artifacts relating to the use or habitation sites, all construction shall cease within at least 50 feet of the discovery and halted until the proper authorities are contacted. Authorities, to include the county corner and law enforcement, shall evaluate and make a determination and a formal review of the find. The county coroner has the legal responsibility for determining whether or not the remains are native indigenous people. B. If it is established that the remains are of native	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	indigenous people, the Native American Heritage Commission (NAHC) shall be contacted by the coroner under the California Health and Safety Code (Senate Bill 297, Chapter 1492, Statutes of 1982 and Section 7050.50). A Most Likely Descendant (MLD) shall be assigned by the NAHC to ensure the ancestor(s) is treated with dignity and respect (Public Resources Code Section 5097.98). A certified osteologist shall be retained to verify the human remains' authenticity and work to help remove the ancestor(s) from the site area with the discretion and advice of the MLD. The GTIOC monitor(s) assigned to the project shall assist the osteologist and archaeological monitors in the recovery process. The MLD shall determine where the ancestors shall be housed pending a final decision for the reinterment of the ancestor(s). 4) GTIOC-4: Recovery and Reburial Procedures A. Specific methods of recovery and reburial procedures have been developed and adopted by the Gabrielino Tongva Indians of California and are required to adhere to when recovering Gabrielino Tongva remains. Conditions may arise where altering some of these guidelines shall be considered. Consultation with the MLD and the GTIOC monitor(s) assigned to the site should then be scheduled to determine other procedures that may be acceptable to the Gabrielino Tongva Nation. Excavation: 1. Consultation between the MLD and the	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	archaeological firm must take place before the recovery of the remains and during the process of extraction. 2. A 50-foot perimeter for each uncovered burial shall be required to safeguard further destruction until the area is examined for additional remains and associated grave goods. 3. In the event blade machines are operating in an adjacent area, a maximum of 2-inch cuts or less shall be permitted in all cultural areas. 4. If more than one area is being excavated for extraction of remains simultaneously, an additional GTIOC must be required. Each excavated burial shall be monitored exclusively. 5. Wooden tools are preferred for the process of recovery; electric chisels and other power tools should be avoided. 6. If remains are pedestaled, they shall be placed on plywood for removal. If remains cannot be pedestaled due to soil conditions, remains shall be carefully placed in cloth bags. 7. Soils adjacent to burials shall be saved for reburial in plastic containers. 8. No photography (both film and digital) or video is allowed to be taken of the remains or the site. Drawings of remains are permitted to retain the orientation of the ancestors for reinterment purposes only. Coroner photographs of the remains may not be	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	published for any purpose. Testing: 1. DNA testing cannot be undertaken. 2. No invasive testing which would compromise the integrity of the remains is permitted. 3. Macroscopic analysis is permitted. 4. Any associated grave goods (such as shell) may be used for dating purposes of each burial. 5. When remains are unearthed, 1-foot X 1-foot test pits will be allowed to establish the extent of the burial area when necessary. 6. All windrows within a 50-foot area must be screened (either wet or dry). Storage: 1. Natural cotton bags and sheeting or cotton drop cloths shall be used to store remains until the time of reinterment. Deer or other native hides may be used to cover the bagged and wrapped remains until the reburial and may become the burial wrapping. 2. Bone fragments are also subject to be bagged in cotton. 3. Until the scope of the project is completed, storage of ancestors shall be done in close proximity to the location of excavation or a protected area must be provided by the landowner or archaeologist.	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

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	Reburial: 1. Efforts shall be made to keep the remains within the same location or in close proximity to the removal site as possible. It is preferable to repatriate the remains within a 0.50-mile radius of the original grave site. If it is not possible to identify a proper location within the 0.50-mile radius, a secure location will be valued over distance. 2. If the preponderance of remains is uncovered in or excavated from one area, the reinterment should be in that area. 3. The reburial site should offer the best long-term protection against any additional disturbances. 4. Each reburial requires approximately 4 feet X 5.5 feet when fully articulated and should be at a depth of 6–10 feet. The purpose of this depth is to ensure difficulty in disturbing the reburial and to allow adequate room for capping if necessary. 5. Any isolated bone fragments uncovered on site may be buried together in an individual burial pit with indigenous animal skins, seaweed, or the cotton cloth used for all bagged fragments. 6. All associated grave goods and artifacts along with soils shall be buried together with the ancestors. 7. No drawings of any other images of ancestral remains may be used for publication without	

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
	consultation and the approval of the GTIOC monitors and appointed MLD for the site. Costs: 1. The landowner(s) shall be responsible for all costs related to the proper storage and reburial of remains excavated on their property to include all burial materials as required in these procedure guidelines. 2. The landowner(s) shall be financially responsible for providing reburial plots that are acceptable by the MLD. **Compliance Measure CUL-1 Human Remains.** If human remains are encountered during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to California Public Resources Code (PRC) Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.	
Cumulative Tribal Cultural Resources Impacts. **Less Than Significant with Mitigation Incorporated.** Potential impacts of the proposed project to unknown tribal cultural	Refer to Threshold 4.13.1(ii) above for Mitigation Measure TCR-1 and Compliance Measure CUL-1.	Less Than Significant Impact.

Table 1.A: Summary of Potential Environmental Impacts, Mitigation Measures, Compliance Measures, and Level of Significance

Potential Environmental Impact	Mitigation Measures and Compliance Measures	Level of Significance After Mitigation
resources, when combined with the impacts of past, present, and reasonably foreseeable projects in the City of Long Beach, could contribute to a cumulatively significant impact due to the overall loss of archaeological artifacts and cultural resources unique to the region. However, each discretionary development proposal received by the City is required to undergo environmental review pursuant to CEQA. If there were any potential for significant impacts to archaeological or tribal cultural resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures for each project. When resources are assessed and/or protected as they are discovered, impacts to these resources are less than significant. As such, implementation of Mitigation Measure TCR-1 and Compliance Measure CUL-1 would ensure that the proposed project, in conjunction with other development in the City, would not result in a significant cumulative impact to unique tribal cultural resources and previously undiscovered buried human remains.		

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2.0 INTRODUCTION

2.1 OVERVIEW

This Draft Environmental Impact Report (EIR) has been prepared to evaluate environmental impacts associated with the proposed Fire Station No. 9 at 4101 Long Beach Boulevard Project (proposed project) in the City of Long Beach (City). The City is the "public agency which has the principal responsibility for carrying out or approving the project" and, as such, is the "Lead Agency" for this project under the California Environmental Quality Act of 1970 (CEQA) (*State CEQA Guidelines for Implementation of CEQA* Section 15367). CEQA requires the Lead Agency to consider the information contained in the EIR prior to taking any discretionary action. This Draft EIR is intended to serve as an informational document to be considered by the City and the Responsible Agencies during deliberations on the proposed project. The anticipated project approvals associated with the proposed project are described in Chapter 3.0, Project Description.

An Initial Study (IS) (February 2022) (provided in Appendix A of this Draft EIR) was prepared for the proposed project. Following preparation of the IS, the City of Long Beach, as the Lead Agency, determined that the proposed project may have a significant effect on the environment and that an EIR would be required to more fully evaluate potential adverse environmental impacts that may result from development of the project. As a result, this Draft EIR has been prepared in accordance with CEQA, as amended (Public Resources Code [PRC] Section 21000, et seq.), and the CEQA Guidelines for Implementation of CEQA (California Code of Regulations [CCR], Title 14, Section 15000, et seq.). This Draft EIR also complies with the procedures established by the City for the implementation of CEQA.

Questions regarding the preparation of this Draft EIR and the City's review of the proposed project should be referred to the following:

Maryanne Cronin, Planner
City of Long Beach Development Services, Planning Bureau
411 West Ocean Boulevard, 3rd Floor
Long Beach, CA 90802
Phone: (562) 570-5683
Email: LBDS-EIR-Comments@longbeach.gov

2.2 ENVIRONMENTAL REVIEW PROCESS

The California Environmental Quality Act (CEQA) Public Resources Code (PRC) Section 21000, et seq., requires that a public agency prepare an EIR when the public agency finds substantial evidence that the project may have a significant effect on the environment (PRC Section 21080 (d)). The basic purposes of CEQA are to:

1. Inform governmental decision makers and the public about the potential significant environmental effects of proposed activities;

2. Identify the ways that environmental damage can be avoided or significantly reduced;

3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and

4. Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

In compliance with the *State CEQA Guidelines,* the City has taken steps to maximize opportunities for the public and other public agencies to participate in the environmental review process. The City conducted the scoping process and held a public scoping meeting, prepared an IS, issued a Notice of Preparation (NOP) for the proposed project, and determined that an EIR was required to evaluate the potentially significant environmental effects of the proposed project and related actions. Further, this Draft EIR is subject to public review and comment. These topics related to the environmental review process are described in further detail below.

2.2.1 Initial Study and Notice of Preparation

The City, as the Lead Agency, originally prepared an IS and issued an NOP for the EIR on February 18, 2022, which was distributed via the State Clearinghouse (SCH). The SCH issued a project number for the EIR (SCH No. 2022020416). The primary purpose of preparing the IS was to scope the environmental analysis and evaluate potential environmental impacts that may result from project approval. The IS was also used to scope out environmental issues that were determined to be "less than significant" or "no impact."

In accordance with the *State CEQA Guidelines,* Section 15082, the IS/NOP was circulated to responsible agencies and individuals for a period of 32 days, during which time written comments were solicited pertaining to environmental issues and topics that the EIR should evaluate.

Responses to the IS/NOP were received from the following agencies:

- Native American Heritage Commission (NAHC)
- California Department of Transportation (Caltrans), District 7

The following individuals submitted written comments on the NOP:

- David & Kathy Walker
- Stephanie Booth
- John Millen

2.2.2 Scoping Meeting Summary

The City held a public scoping meeting to present the original project and to solicit input from interested individuals regarding environmental issues that should be addressed in the Draft EIR. The virtual scoping meeting was held on March 9, 2022, from 5:00 p.m. to 7:00 p.m. No environmental

issues and concerns were raised at the scoping meeting. Appendix A includes the IS/NOP and copies of written comments received in response to the IS/NOP.

2.2.3 Draft EIR

This Draft EIR is being distributed to numerous public agencies and other interested parties for review and comment. The Draft EIR is also available at the locations listed below. Copies of the Draft EIR are also available on the City's website, which is provided below.

City of Long Beach
Department of Development Services/Planning Bureau
411 W. Ocean Boulevard, 2nd Floor
Long Beach, CA 90802

Dana Neighborhood Library
3680 Atlantic Avenue
Long Beach, CA 90807

Billie Jean King Main Library
200 W. Broadway
Long Beach, CA 90802

The Draft EIR is also available on the City's website:

http://www.longbeach.gov/lbds/planning/environmental/reports/

All comments received from agencies and individuals on the Draft EIR will be accepted during the public review period, which will not be less than 45 days, in compliance with CEQA. All comments on the Draft EIR should be sent to the following City contact person:

Maryanne Cronin, Planner
City of Long Beach Development Services, Planning Bureau
411 West Ocean Boulevard, 3rd Floor
Long Beach, CA 90802
Phone: (562) 570-5683
Email: LBDS-EIR-Comments@longbeach.gov

Comments will only be accepted in written form via email and/or hardcopy letter delivered to the above-referenced email and mailing addresses, respectively. After the public review and comment period, written responses to all comments received pertaining to environmental issues will be prepared as part of the Final EIR. As required by CEQA, responses to comments submitted by responsible public agencies will be distributed to those agencies for review (in accordance with Section 15088 of the *State CEQA Guidelines*) at least 10 days prior to consideration and approval of the Final EIR by City Council. Upon completion of the Final EIR and other required documentation, the City Council may certify the Final EIR, adopt findings relative to the proposed project's

environmental effects after implementation of mitigation measures, and approve or deny the project.

2.3 SCOPE OF THIS DRAFT EIR

This Draft EIR has been prepared to evaluate environmental impacts that may result from implementation of the proposed project. As the Lead Agency, the City has the authority for preparation of this Draft EIR and, after the comment/response process, certification of the Final EIR (FEIR) and approval of the proposed project as described in this Draft EIR.

The City has the authority to make decisions on discretionary actions relating to development of the proposed project. As previously stated, this Draft EIR is intended to serve as an informational document to be considered by the City during deliberations on the proposed project. This Draft EIR evaluates and mitigates a reasonable worst-case scenario of potential impacts associated with the proposed project.

As previously stated, the City is the Lead Agency for the proposed project under CEQA (*State CEQA Guidelines* Section 15367). CEQA requires the Lead Agency to consider the information contained in the EIR prior to taking any discretionary actions. This Draft EIR provides information to the Lead Agency and other public agencies, the general public, and decision makers regarding the potential environmental impacts from construction and operation of the proposed project. The purpose of the public review of the Draft EIR is to evaluate the adequacy of the environmental analysis in terms of compliance with CEQA. Section 15151 of the *State CEQA Guidelines* states the following regarding standards from which adequacy is judged:

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

Under CEQA (PRC Section 21002.1[a]):

> "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."

As previously discussed in Chapter 1.0, Executive Summary, an EIR is the most comprehensive form of environmental documentation identified in CEQA and the *State CEQA Guidelines* and provides the information needed to assess the environmental consequences of a proposed project. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts.

2.4 EFFECTS FOUND NOT TO BE SIGNIFICANT

As required by *State CEQA Guidelines* Section 15128, this Draft EIR identifies the potential effects of the proposed project that were determined not to be significant and adverse, and therefore, not addressed in the Draft EIR. The proposed project would not result in adverse impacts related to aesthetics, agriculture and forestry resources, biological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire. These issues are briefly discussed below along with the substantiation for why they were determined not to be significant.

2.4.1 Aesthetics

The proposed project involves the development of a 12,780-sf two-story fire station and associated improvements. The project site is not in the vicinity of any designated scenic vistas; however, the Urban Design Element of the City's General Plan designates the approach road to Rancho Los Cerritos, which is approximately 0.3 mile northwest of the project site, as a scenic route. The proposed project would not remove alter any portion of this scenic route. With approval of the requested General Plan Amendment (GPA) consolidating both parcels under the Neighborhood Serving Center or Corridor Low Density (NSC-L) PlaceType, the proposed project would comply with the applicable building height limits and policies included in the City's Land Use and Urban Design Elements. Additionally, the proposed project's building height of 32 ft, 6 inches, would not obstruct any existing views. Therefore, the proposed project would not have a substantial effect on scenic views. Additionally, the proposed project would not conflict with City policy related to the protection of scenic views from the Rancho Los Cerritos approach road.

According to the California Department of Transportation (Caltrans) Scenic Highway Mapping Program, there are no Designated or Proposed Scenic Highways in the vicinity of the project site.[1] Therefore, implementation of the proposed project would not impact scenic resources within a State Scenic Highway.

Although the proposed project includes lighting, these light sources would be comparable to lighting in the existing condition and would replace some of the lighting associated with the current uses on site. The proposed project would comply with the development regulations outlined in Section 21.41.259 of the City's Zoning Ordinance, which requires that parking lots be illuminated with directed and shielded lights in order to prevent impacts to adjacent properties from light and glare. Landscaping and screening requirements set forth in the City's Zoning Ordinance would also reduce impacts created by lighting. The proposed project would include egress windows, which would be accompanied by overhangs which would significantly reduce potential glare. Flashing lights on the station's fire apparatus would only be operated when responding to emergency calls or during routine vehicle inspections and would only be visible from land uses surrounding the fire station for a very short duration during each instance. Therefore, the use of flashing lights would be fairly limited and would not result in enough light or glare to be considered substantial or affect nighttime

[1] California Department of Transportation (Caltrans). 2021. California State Scenic Highway System Map. Website: https://www.arcgis.com/home/item.html?id=f0259b1ad0fe4093a5604c9b838a486a (accessed November 12, 2021).

views. For these reasons discussed above, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the surrounding urban area, and project impacts would be less than significant. Therefore, project-related impacts with respect to aesthetic resources are not evaluated further in this Draft EIR.

2.4.2 Agricultural and Forestry Resources

The planning area is almost entirely developed and is not used for agricultural or forestry purposes. The project site is not zoned for agricultural use. Therefore, the proposed project would not conflict with zoning designations for agricultural use or land currently under a Williamson Act contract. According to the Los Angeles County Important Farmland Map, the entire project site and surrounding area is designated as "Urban and Built Up Land."[2] There are no designated Prime Farmlands, Unique Farmlands, or Farmlands of Statewide Importance on the project site or in the project's immediate vicinity, nor are there areas zoned for agricultural or forestry uses. Additionally, the project site does not contain any timberland resources. Implementation of the proposed project would not result in environmental changes that could result in the conversion of farmland to non-agricultural use or the conversion of forest land to non-forest use. Therefore, project-related impacts with respect to agricultural and forestry resources are not evaluated further in this Draft EIR.

2.4.3 Biological Resources

The project site is located within an urbanized area of the City, as the entirety of the surrounding vicinity has been previously developed. There are no native habitats within the project site with the potential to support sensitive plant and animal species. The project site contains ornamental landscaping and non-native trees, which could potentially support nests and roosting for bird species. However, if vegetation removal were to occur during the nesting bird season (January 1 through September 30), a pre-construction survey would be required to ensure that any active nests are identified and appropriate measures taken to ensure that impacts to nesting species are in compliance with regulations established in the Migratory Bird Treaty Act of 1918 (MBTA) (refer to Compliance Measure BIO-1, below).

There are no riparian habitats or other sensitive natural communities as identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS). The project site does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act. Within the vicinity of the project site, there are no large areas of natural habitat that would facilitate migratory fish or wildlife movement or serve as a wildlife corridor. There are no adopted Habitat Conservation Plans (HCP), Natural Communities Conservation Plans (NCCP), or other similar plans within the City. For the reasons stated above, project-related impacts with respect to biological resources are not evaluated further in this Draft EIR.

[2] California Department of Conservation (DOC). 2018. Los Angeles County Important Farmland. Website: https://www.conservation.ca.gov/dlrp/fmmp/Pages/county_info.aspx (accessed September 27, 2021).

The following Compliance Measure would be applicable to the proposed project:

Compliance Measure BIO-1 **Compliance with Migratory Bird Treaty Act (MBTA).** Tree and vegetation removal shall be restricted to outside the active nesting season (January 1 through September 30). If construction is proposed between January 1 and September 30, a qualified biologist familiar with local avian species and the requirements of the MBTA and the California Fish and Game Code shall conduct a pre-construction survey for nesting birds no more than 3 days prior to construction. The survey shall include the entire area that will be disturbed. The results of the survey shall be recorded in a memorandum and submitted to the City of Long Beach (City) Director of Development Services, or designee, within 48 hours. If the survey is positive, and the nesting species are subject to the MBTA or the California Fish and Game Code, the memorandum shall be submitted to the California Department of Fish and Wildlife (CDFW) to determine appropriate action. If nesting birds are present, a qualified biologist shall be retained to monitor the site during initial vegetation clearing and grading, as well as during other activities that would have the potential to disrupt nesting behavior. The monitor shall be empowered by the City to halt construction work in the vicinity of the nesting birds if the monitor believes the nest is at risk of failure or the birds are excessively disturbed.

2.4.4 Geology and Soils

According to the Alquist-Priolo Earthquake Fault Zones delineated by the California Geological Survey (CGS), there are no known active earthquake faults on the project site.[3] However, given the City's location in the seismically active area of Southern California, the proposed project would be required to comply with General Plan LU Policy 20-12, which requires compliance with current building codes to reduce potential impacts associated with seismic hazards. In addition, implementation of recommendations outlined in the project-specific *Geotechnical Investigation Report* as required in Compliance Measure GEO-1 would reduce potential impacts from seismic ground shaking. These measures include requiring the structural design of foundations be performed by the structural engineer and conform to the 2019 California Building Code. As such, implementation of the proposed project would not expose people or structures to substantial adverse effects related to the risk of seismic-related failure or liquefaction or expose people or structures to substantial adverse effects related to the risk of seismic-related failure (e.g., liquefaction or landslides).

The proposed project would be required to comply with the Construction General Permit, which requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) (see Compliance Measure

[3] California Department of Conservation (DOC). 2019. California Earthquake Hazards Zone Application. Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed September 28, 2021).

HYD-1, in Section 4.10, Hydrology and Water Quality). The SWPPP would detail Erosion Control and Sediment Control Best Management Practices (BMPs) to be implemented during project construction to minimize erosion and retain sediment on site. With compliance with the requirements of the Construction General Permit and with implementation of the construction BMPs, construction impacts related to on-site erosion during construction would be less than significant.

The project site is not within a state-designated Zone of required investigation for liquefaction according to the CGS (2021). The *Geotechnical Investigation Report* indicates that lateral spreading is not a potential concern with respect to the proposed project. The project site is not located within an area of known subsidence that may be associated with groundwater, peat loss, or oil extraction. The proposed project would not use septic tanks or alternative wastewater disposal systems.

The project site is located within an urbanized area that has been previously graded and paved. Due to previous development on the project site, any paleontological resources or unique geologic features that may have been present at one time would likely have been previously disturbed and therefore the likelihood of encountering intact resources is low. Excavation activities are not expected to extend more than 3–5 ft below ground surface (bgs); however, in the event that unanticipated fossil discovery occurs during construction or excavation, implementation of Compliance Measure GEO-2 would reduce potential impacts to a less than significant level. Therefore, project-related impacts with respect to geology and soils are not evaluated further in this Draft EIR.

Compliance Measure GEO-1 **Compliance with the Recommendations in the Project Geotechnical Investigation Report.** The City's Construction Contractor shall implement the recommendations of the *Geotechnical Investigation Report* prepared for this project (Twining 2021) and applicable sections of the most current California Building Code (CBC). Prior to the issuance of building permits for planned structures, the Project Soils Engineer shall review building plans to verify that the structural design conforms to the requirements of the *Geotechnical Investigation Report* and the City of Long Beach Municipal Code. In accordance with the *Geotechnical Investigation Report,* overexcavation beneath the proposed building foundations would be required and, if necessary, the placement of engineered fill.

Compliance Measure GEO-2 **Discovery of Paleontological Resources.** In the event that Paleontological Resources are encountered during construction, in accordance with Society of Vertebrate Paleontology (SVP) 2010 guidelines, no further disturbance shall occur until a qualified professional paleontologist is notified and retained to evaluate the discovery. The retained paleontologist shall determine the significance of the discovery and determine if additional mitigation or treatment is warranted. Development in the area of discovery

shall resume when the discovered resource is properly documented, and authorization is given to resume construction work. Any significant paleontological resources found during construction monitoring shall be prepared, identified, analyzed and permanently curated in an approved regional museum repository.

2.4.5 Hazards and Hazardous Materials

Hazardous materials are chemicals that could potentially cause harm during an accidental release or mishap, and are defined as being toxic, corrosive, flammable, reactive, and an irritant or strong sensitizer.[4] Hazardous substances include all chemicals regulated under the United States Department of Transportation "hazardous materials" regulations and the United States Environmental Protection Agency (EPA) "hazardous waste" regulations. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment. The probable frequency and severity of consequences from the routine transport, use, or disposal of hazardous materials is affected by the type of substance, the quantity used or managed, and the nature of the activities and operations.

The amount of hazardous chemicals present during construction is limited and would be in compliance with existing government regulations, such as the Hazardous Materials Transportation Act, the Resource Conservation and Recovery Act, and the California Code of Regulations (CCR, Title 22). All transport, handling, use, and disposal of substances such as petroleum products, paints, and solvents related to the operation and maintenance of the proposed project would be required to comply with all federal, State, and local laws regulating the management and use of hazardous materials.

Based on the results of the *Phase I ESA* and the *Phase II Soil Vapor Site Investigation*, none of the off-site uses surrounding the project site are a vapor encroachment concern (VEC) or Recognized Environmental Concerns (REC) and no further investigation is warranted or recommended. Hazardous substances associated with the proposed fire station would be limited in both amount and use such that they can be contained (stored or confined within a specific area) without impacting the environment. The proposed project does not involve activities that would result in the emissions of hazardous materials or acutely hazardous substances, and there are no schools within 0.25 miles from the project site. Because the project site is not listed on the DTSC Hazardous Waste and Substances Site List (Cortese List, compiled pursuant to Section 65962.5 of the Government Code),[5] impacts related to this topic are considered less than significant.

[4] A "sensitizer" is a chemical that can cause a substantial proportion of people or animals to develop an allergic reaction in normal tissue after repeated exposure to a chemical (U.S. Department of Labor, 2017. Appendix A TO Sections 1910.1200—Health Hazard Criteria, Section A.4, Respiratory or Skin Sensitization. Website: https://www.osha.gov/dsg/hazcom/hazcom-appendix-a.html [accessed March 25, 2020]).

[5] Ibid.

The project site is located outside the boundaries of the Long Beach Airport Planning Boundary/ Airport Influence Area;[6] however, according to the Los Angeles County Airport Land Use Plan 1991 (revised in 2004), the project site is located in the Federal Aviation Administration's (FAA) Part 77 Notification Area. The proposed project includes a General Plan Amendment to implement a consistent PlaceType (NSC-L) on the entire project site. The ALUC cleared the implementation of the NSC-L PlaceType on properties that are in close vicinity of the Long Beach Airport in association with the City's adoption of the Land Use Element update in 2019; therefore, the new fire station would not create any new safety hazards related to any nearby airports. With adherence to the regulatory standards provided in Compliance Measure HAZ-1, implementation of the proposed project would result in less than significant impacts related to safety hazards for people working in the project area.

Compliance Measure PS-1, provided below in subsection 2.4.9, Public Services, requires that a Construction Staging and Traffic Management Plan (CSTMP) be prepared for the proposed project to ensure that emergency vehicles would be able to navigate through any traffic congestion due to construction activities. Compliance Measure PS-1 also requires that lane restrictions on Long Beach Boulevard be limited to off-peak hours, to the extent feasible, to limit the potential impacts on emergency response and evacuation plans. With implementation of Compliance Measure PS-1, potential impacts related to LBFD's ability to implement an emergency response plan or emergency evacuation access during construction would be less than significant. The proposed project does not include any permanent changes to public or private roadways that would physically impair or otherwise conflict with the City's Emergency Operations Plan or another adopted emergency response plan or emergency evacuation plan. Therefore, project-related impacts with respect to hazards and hazardous materials are not evaluated further in this Draft EIR.

Compliance Measure HAZ-1 **Federal Aviation Regulation Title 14 Part 77.** The City of Long Beach (City) shall notify the Federal Aviation Administration (FAA) 45 days prior to construction activities of any proposed structure(s) that would be located within 10,000 feet of the nearest runway at the Long Beach Airport and which exceeds a 50:1 imaginary surface slope. Prior to issuance of a building permit, the City Director of Development Services, or designee, shall confirm that a copy of all written findings from the FAA regarding compliance with the Part 77, height limit regulations, has been received by the City.

2.4.6 Hydrology and Water Quality

Pollutants of concern during project construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and transport of sediment downstream compared to existing conditions. During a storm event, soil erosion could occur at an accelerated rate. In addition, construction-related pollutants such as

[6] Los Angeles County Airport Land Use Commission. Long Beach Airport Influence Area. Website: https://planning.lacounty.gov/assets/upl/project/aluc_airport-long-beach.pdf (accessed December 2021).

chemicals, liquid and petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste could be spilled, leaked, or transported via stormwater runoff into nearby drainages and into downstream receiving waters.

As required by Compliance Measure HYD-1, the proposed project is subject to the requirements of the *Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges from the City of Long Beach* (City of Long Beach MS4 Permit), Order No. R4-2014-0024, NPDES No. CAS004003, LBMC Section 8.96.120. Compliance Measure HYD-1 requires the implementation of construction BMPs to reduce impacts to water quality during construction, including those impacts associated with soil erosion and siltation. Compliance Measure HYD-1 would ensure that construction impacts related to waste discharge requirements, water quality standards, surface water quality and on- or off-site erosion or siltation would be less than significant. Additionally, compliance with LBMC Section 8.96.120 ensures BMPs would be implemented to control the discharge of pollutants in stormwater runoff as a result of construction activities.

During project operations, in compliance with the City of Long Beach NPDES MS4 Permit and as specified in Compliance Measure HYD-2, the proposed project would be required to comply with the LBMC Section 8.96.130, which requires the development and implementation of structural and nonstructural BMPs to be implemented on a post-construction basis, a maintenance agreement to assure the proper performance of BMPs, and LBMC Section 18.74, which requires the preparation of a Low Impact Development (LID) plan that addresses the applicable requirements in the LBMC including implementation of BMPs, the infiltration, capture and reuse, evapotranspiration, and/or on-site treatment of stormwater through stormwater BMPs allowed in the LID Best Management Practices Manual. With implementation of Compliance Measure HYD-2, the proposed project would not result in an exceedance of planned or existing stormwater drainage systems or provide substantial additional sources of polluted runoff.

Historically, groundwater has been encountered at depths below 70 ft bgs. According to the *Geotechnical Investigation Report* prepared for the project, groundwater was not encountered during exploration to a maximum depth of approximately 81.5 ft bgs. As stated previously, construction grading and utility trenching activities are not expected to extend more than 3–5 ft bgs. Because of the depth to groundwater, excavation activities would not be anticipated to encounter groundwater during construction. Therefore, groundwater dewatering would not be required. Furthermore, groundwater extraction would not be required during project construction.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the project site is within Zone X, which is considered an Area of Minimal Flood Hazard. As the project site is not located within a 100-year floodplain, the proposed project would not impede or redirect flood flows.

According to the Department of Conservation (DOC) tsunami hazard map for Los Angeles County, the project site is not inside a tsunami hazard area.[7] Additionally, according to the City's Seismic

[7] California Department of Conservation (DOC). Los Angeles County Tsunami Hazard Area. Website: https://www.conservation.ca.gov/cgs/tsunami/maps/los-angeles (accessed September 2021).

Safety Element (1988) and the California Emergency Management Agency (Cal EMA), the project site is not located within a zone of seiche areas. In the event of a tsunami, the City has established response procedures as described in the City of Long Beach Natural Hazards Mitigation Plan.

For the reasons stated above, the proposed project would not result in significant impacts to hydrology and water quality. Therefore, project-related impacts with respect to mineral resources are not evaluated further in this Draft EIR.

Compliance Measure HYD-1 Prior to issuance of a grading permit, the City of Long Beach's (City) Director of Development Services, or designee, shall confirm that Best Management Practices (BMPs) associated with construction activities have been developed to ensure that the potential for soil erosion and sedimentation is minimized and to reduce pollutant discharges to the City MS4 as a result of construction activities in compliance with Long Beach Municipal Code (LBMC) Section 8.96.120. These BMPs shall be included in the project plan specifications and implemented by the project contractor.

Compliance Measure HYD-2 Prior to issuance of a grading permit, the City's Director of Development Services, or designee, shall confirm that structural and nonstructural BMPs have been developed to be implemented on a post-construction basis along with an associated maintenance agreement in compliance with the requirements of LBMC Section 8.96.130. In addition, the City's Director of Development Services, or designee, shall confirm that a Low Impact Development (LID) Plan has been prepared. The LID Plan shall specify the BMPs to be incorporated into the project design to target pollutants of concern in stormwater runoff from the project site in compliance with LBMC Section 18.74.

2.4.7 Mineral Resources

The City's General Plan Conservation Element (1973) and Open Space and Recreation Element (2002) does not identify any locally important mineral resources on the project site. The project site falls within an MRZ-4 zone, which is assigned to areas for which there is insufficient information available to determine whether mineral resources are present.[8] However, the project site is currently developed with an office building and uses in the vicinity include commercial buildings, retail buildings, and single-family and multi-family residences. Therefore, the proposed project is not anticipated to result in impacts related to the loss of availability of a known mineral resource that would be of value to the region and residents of the State because the area is predominantly

[8] California Department of Conservation (DOC). 2000. California Surface Mining and Reclamation Policies and Procedures. Guidelines for Classification and Designation of Mineral Lands. January. Website: https://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf (accessed December 2021).

developed and is not planned for use as a mineral extraction area. Therefore, project-related impacts with respect to mineral resources are not evaluated further in this Draft EIR.

2.4.8 Population and Housing

The proposed project does not include any residential land uses and is not anticipated to affect the population or housing availability of the City. Although the proposed project would increase the number of employees at the project site during construction activities, it is expected that local and regional construction workers would be available to serve the proposed project's construction needs. The proposed project would not cause or result in direct population growth because the proposed project would not provide or remove housing on the project site. Therefore, the project would not result in a loss of housing or displace any persons living on the project site, nor require or necessitate the development of replacement housing elsewhere. Therefore, project-related impacts with respect to population and housing are not evaluated further in this Draft EIR.

2.4.9 Public Services

The proposed project involves the replacement of the original Long Beach Fire Department (LBFD) Fire Station No. 9 with a new station within the Fire Station No. 9 service area that would comply with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards. With project implementation, the response profile within the Fire Station No. 9 service area would be improved, which would help the LBFD meet its response time goals. During construction, implementation of Compliance Measure PS-1 would ensure that fire protection vehicles would be able to navigate through any traffic congestion due to construction activities, and that impacts to emergency response times would remain less than significant.

Construction of the proposed project is not expected to have any substantial adverse impacts on existing police protection services, as construction workers would occupy a temporary position and would only incrementally increase the demand for police protection services, if at all. The proposed project would not increase the City's number of employed firefighters or indirectly increase the City's population and therefore would not generate demand for additional police protection services or elicit the need for new or altered LBPD facilities.

The proposed project does not include any residential uses that would increase population growth, generate an increased demand for school facilities. Additionally, implementation of the proposed project would not result in an increase in the use of existing neighborhood and regional parks, recreational facilities, or other public facilities. Therefore, project-related impacts with respect to public services are not evaluated further in this Draft EIR.

Compliance Measure PS-1 **Construction Staging and Traffic Management Plan.** A Construction Staging and Traffic Management Plan (CSTMP) shall be prepared for approval by the City of Long Beach Traffic Engineer, or designee, and implemented during proposed project construction. The CSTMP shall also include the name and phone number of a contact person who can be reached 24 hours per day regarding construction traffic complaints or emergency situations. In addition, the CSTMP shall

take into account and coordinate with other construction staging and traffic management plans that are in effect or have been proposed for other projects in the City of Long Beach. The CSTMP may include, but not be limited to, the following:

- Construction activities shall be scheduled to reduce the effect on traffic flow on arterial streets.
- Construction trucks shall be rerouted to reduce travel on congested streets.
- The Construction Contractor shall keep haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The Construction Contractor shall clean adjacent streets, as directed by the City Traffic Engineer, or designee, of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.
- Construction vehicles, including construction personnel vehicles, shall not park on public streets.
- Construction vehicles shall not stage or queue where they interfere with pedestrian and vehicular traffic or block access to nearby businesses.
- If feasible, any traffic lane closures will be limited to off-peak traffic periods, as approved by the City of Long Beach Public Works Department.
- The general public shall be notified in advance of any traffic lane closures so that motorists can plan accordingly.
- The Long Beach Police Department and the Long Beach Fire Department shall be notified a minimum of 24 hours in advance of any lane closures or other roadway work.
- The Long Beach Unified School District shall be notified in advance of any lane closures on Long Beach Boulevard.

2.4.10 Recreation

The proposed project would not develop residential uses that would require the construction or expansion of recreational facilities that might have an adverse effect on the environment. The proposed project does not propose any public recreational uses, which might have an adverse physical effect on the environment. Therefore, project-related impacts with respect to recreation are not evaluated further in this Draft EIR.

2.4.11 Utilities and Service Systems

The proposed project would connect to existing utility infrastructure through established utility easement agreements. The proposed project would not result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities. Construction, short-term construction activities would require minimal water and operational use of the proposed project would not necessitate new or expanded water entitlements, and the LBWD would be able to accommodate the increased demand for potable water. Additionally, development of the proposed project would not require the construction of new wastewater treatment or collection facilities. Implementation of Compliance Measure HYD-1 and Compliance Measure HYD-2, which require compliance with the City's MS4 Permit and Long Beach Municipal Code would ensure any potential impacts to stormwater and drainage facilities would be less than significant. Short-term construction activities would be limited to providing power to the staging area and portable construction equipment and would not substantially increase demand for electricity. The proposed project would be designed to achieve a Leadership in Energy and Environmental Design (LEED) Silver rating which would comply with, but also exceed, the Title 24 California Green Building Standards Code and there would be sufficient electricity supplies available.

Short-term construction activities would not result in demand for natural gas since construction activities/equipment would not require the use of or access to existing natural gas facilities. The proposed project would be required to adhere to all federal, State, and local requirements for energy efficiency, including the Title 24 standards. Operation of the proposed project would negligibly increase the annual natural gas consumption in the Long Beach Energy Resources Department's service area by less than 0.00001 percent. The proposed project would not involve the construction or relocation of new or expanded telecommunications facilities and would be provided to the site from existing infrastructure.

The generation of construction waste would be temporary, would cease upon construction completion, and would not be substantial. Construction of the proposed project would comply with existing or future statutes and regulations, including the City's Construction and Demolition Management Program (CDMP) set forth in Chapter 18.67 of the Municipal Code and any applicable State or federal waste diversion programs. Operation of the proposed project would comply with existing or future statutes and regulations, including waste diversion programs mandated by City, State, or federal law. The proposed project is not anticipated to produce substantially more solid waste than the existing office uses on the project site. Therefore, project-related impacts with respect to utilities and service systems are not evaluated further in this Draft EIR.

2.4.12 Wildfire

According to the CAL FIRE Very High Fire Hazard Severity Zone Maps for the Los Angeles County region, the entire City of Long Beach is designated as a non-VHFHSZ, and the City does not include an SRA. The nearest VHFHSZ to the project site is approximately 8 miles to the southwest at the base of the Palos Verdes Peninsula on the eastern side of Rancho Palos Verdes. The nearest SRA is in the Hacienda Hills, approximately 14 miles northeast of the project site. Therefore, project-related impacts with respect to wildfire are not evaluated further in this Draft EIR.

2.5 FORMAT OF THE EIR

Pursuant to *State CEQA Guidelines,* Section 15120(c), this Draft EIR contains the information and analysis required by *State CEQA Guidelines,* Sections 15122 through 15131. Each of the required elements is covered in one of the Draft EIR chapters described below.

Chapter 1.0: Executive Summary

Chapter 1.0 contains the Executive Summary of the Draft EIR, listing all significant project impacts and the level of significance of each impact. The summary is presented in a tabular format.

Chapter 2.0: Introduction

Chapter 2.0 contains a discussion of the purpose and intended use of the Draft EIR. A summary discussion of effects found not to be significant and, therefore, not included in the Draft EIR analysis is also included in this chapter.

Chapter 3.0: Project Description

Chapter 3.0 includes a discussion of the project's geographical setting, the history of the planning area, the project's goals, objectives, characteristics, and components, and the anticipated discretionary action for the project.

Chapter 4.0: Environmental Analysis, Impacts, and Mitigation Measures

Chapter 4.0 includes an analysis of the proposed project's environmental impacts. It is organized into the following topical sections: air quality, cultural resources, energy, greenhouse gas emissions, land use and planning, noise, transportation/traffic, and tribal cultural resources. The environmental setting discussions describe the "existing conditions" of the environment in the planning area and in the vicinity of the site as they pertain to the environmental issues being analyzed (Section 15125 of the *State CEQA Guidelines*).

The project impact discussions identify and focus on the significant environmental effects of the proposed project. The direct and indirect significant effects of the proposed project on the environment are identified and described, giving due consideration to both the short-term and long-term effects, as necessary (Section 15126.2[a] of the *State CEQA Guidelines*).

Chapter 4.0 also includes a discussion of the cumulative effects of the proposed project within the analysis of each environmental topic when considered in combination with other projects, causing related impacts as required by Section 15130 of the *State CEQA Guidelines*.

Chapter 5.0: Alternatives

In accordance with *State CEQA Guidelines* Section 15126.6, the alternatives discussion in Chapter 5.0 describes a reasonable range of alternatives that could feasibly attain the basic objectives of the project and that are capable of eliminating any significant adverse environmental effects or reducing them to a less than significant level. The alternatives analyzed in Chapter 5.0 includes the No Project Alternative. Other alternatives commonly considered, including the Reduced Project Alternative and

the Alternate Location Alternative, are not applicable due to the nature of the proposed project being the replacement of a fire station in a particular service area, and the minimum requirements for an adequate fire safety equipment. The substantive reasons for the elimination of such alternatives are provided in Chapter 5.0. The environmentally superior alternative is also identified.

Chapter 6.0: Other CEQA Considerations

Chapter 6.0 includes CEQA-mandated discussions required by Section 15126.2 of the *State CEQA Guidelines* regarding: (a) energy impacts; (b) growth-inducing impacts; and (c) significant irreversible environmental changes that would result from implementation of the proposed project.

Chapter 7.0: List of Preparers and Persons Consulted

Chapter 7.0 provides a list of the preparers of the Draft EIR, as well as persons consulted during preparation of the Draft EIR.

Chapter 8.0: References

Chapter 8.0 provides the references cited in this Draft EIR.

2.6 INCORPORATION BY REFERENCE

As permitted in Section 15150 of the *State CEQA Guidelines*, an EIR may reference all or portions of another document that is a matter of public record or is generally available to the public. Information from the documents that have been incorporated by reference has been briefly summarized in the appropriate sections of this Draft EIR, along with a description of how the public may obtain and review these documents. These documents include:

- City of Long Beach General Plan Elements (as amended) (website: https://www.longbeach.gov/lbds/planning/advance/general-plan/)

- City of Long Beach Municipal Code and other titles referenced herein (website: https://library.municode.com/CA/long_beach/codes/municipal_code?nodeId=16115)

Documents that are incorporated by reference are available for review at the website links noted above and at the City of Long Beach, Department of Development Services, 411 West Ocean Boulevard, 3rd Floor, Long Beach, California 90802.

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3.0 PROJECT DESCRIPTION

This Draft Environmental Impact Report (EIR) has been prepared to evaluate the environmental impacts that may result from construction and operation of the proposed Fire Station No. 9 (proposed project) at 4101 Long Beach Boulevard in Long Beach, California. As Lead Agency, the City of Long Beach (City) has the authority for preparation of this Draft EIR and, after the comment/ response process, certification of the Final EIR and approval of the proposed project as described in this Draft EIR. This Draft EIR is intended to serve as an informational document to be considered by the City and the Responsible Agencies during deliberations on the proposed project. This Draft EIR evaluates for a reasonable worst-case scenario of potential environmental impacts associated with the proposed project and provides mitigation where necessary.

The City is proposing the development of a new Fire Station No. 9 on a 0.4-acre property located at 4101 Long Beach Boulevard (project site) in Long Beach. The proposed project is intended to replace the original Fire Station No. 9, which was previously located at 3917 Long Beach Boulevard.

3.1 PROJECT OVERVIEW

The proposed project would be located at 4101 Long Beach Boulevard (project site) in the City of Long Beach (City). The proposed project includes an approximately 12,780-square-foot (sf) two-story fire station and associated improvements. The proposed project is intended to meet the City's need to replace the original Fire Station No. 9, which was previously located at 3917 Long Beach Boulevard and is slated for demolition. The project site is currently developed with an approximately 5,000 sf office building, which would be demolished as a part of the proposed project.

3.2 PROJECT LOCATION AND SETTING

The 0.4-acre project site is located at the northwest corner of Long Beach Boulevard and East Randolph Place in the Los Cerritos neighborhood of the City. Long Beach is located in southern Los Angeles County. The project site is comprised of two parcels: Assessor's Parcel Number (APN) 7139-015-017 and APN 7139-015-010. Regional access to the project site is provided by Interstates 405 (I-405) and 710 (I-710), which are located approximately 1.2 miles south and 2 miles west of the project site, respectively. Local access to the project site is provided by Long Beach Boulevard and East Randolph Place. A regional depiction of the project site is presented on Figure 3.1, Regional Location (figures in this chapter are provided at the end of the chapter).

Figure 3.2, Surrounding Land Uses, shows the existing land uses in the vicinity of the project site. As shown on Figure 3.2, the project site is surrounded by single-family residential uses to the northwest and west, a coffee shop and retail stores directly to the north, multi-family residential uses and office uses to the east across Long Beach Boulevard, and office uses to the south.

As shown on Figure 3.3, Existing Project Site Plan, the project site is currently developed with an approximately 5,000 sf single-story office building and related parking and landscaping. The building is currently occupied by Catalina Adventure Tours and would be demolished as part of the proposed project. The project site is generally flat in elevation.

3.3 CURRENT ZONING AND GENERAL PLAN DESIGNATIONS

The project site is comprised of two parcels that carry two different General Plan PlaceType designations.[1] As described above, the project site is currently comprised of APNs 7139-015-017 and 7139-015-010. APN 7139-015-017 is zoned Community Commercial Automobile-Oriented (CCA) and has a General Plan PlaceType of Neighborhood Serving Center or Corridor Low Density (NSC-L). APN 7139-015-010 is zoned Single-Family Residential, Large Lot (R-1-L) and has a General Plan PlaceType of Founding and Contemporary Neighborhood (FCN). The proposed project would merge the parcels and rezone them to a consistent Mixed Use (MU-1) zoning designation. The proposed project also includes a General Plan Amendment (GPA) to implement a consistent PlaceType (NSC-L) on the entire project site.

3.4 PROJECT CHARACTERISTICS

The proposed project would construct a 12,780 sf two-story fire station. Figure 3.4, Conceptual Site Plan, provides an overview of the proposed site plan, including the location of the proposed fire station, parking areas, trash enclosure, power transformer, landscaping, fencing, gates, and driveways. As shown on Figure 3.4, vehicular access to a secured firefighter parking area would be provided through the alley on the northern side of the project site. This parking area would also include an exit-only driveway onto Long Beach Boulevard, with a right-turn only restriction. The parking lot would include a total of 11 parking spaces, including one Americans with Disabilities Act (ADA)-compliant space. The 10 standard parking stalls would include 1 space reserved for low-emissions vehicles, and 2 electric vehicle (EV) charging spaces. All parking areas would be screened with decorative fencing.

Firefighting and emergency medical response vehicles, which are commonly referred to as apparatus, would exit the project site via a driveway off East Randolph Place, with three new traffic signals installed adjacent to the fire station on Long Beach Boulevard and East Randolph Place. The fire station's main public entrance, including an ADA-accessible ramp, would be located on Long Beach Boulevard. A security fence and secured pedestrian gate would be located along the project site's eastern boundary adjacent to the sidewalk. The existing fence wall on the western border of the project site would remain in place. The proposed project would include 15,032 sf of impervious surface area, an increase of 745 sf from existing conditions on the project site.

3.4.1 Project Objectives and Benefits

The following objectives have been established for the proposed project:

[1] Unlike most California cities, which include land use designations in their general plans that typically assign a specific land use type to each parcel and rely on traditional zoning to establish numeric development parameters (e.g., floor area ratios, density), the City's General Plan Land Use Element employs an innovative approach called PlaceTypes, which emphasizes flexibility and allows for a mix of compatible uses.

1. Return Fire Station No. 9 equipment and personnel to its service area in order to help meet the Long Beach Fire Department response time goal of 6 minutes and 20 seconds for structure fires and 6 minutes for Advanced Life Support.
2. Provide a fire station in compliance with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards for fire station design, including the provision of facilities for all genders.
3. Provide a new fire station with a secure apparatus bay to house a 32-foot Type 1 Fire Engine, a 22' Type 3 Brush Rig, a 22-foot Rescue Company Vehicle, and a 22-foot Battalion Chief Vehicle within an enclosed structure.
4. Provide a permanent structure for fire personnel that encourages efficient fire operation and adequate space for fire personnel health and well-being.
5. Provide a new fire station with a flexible layout that allows the Long Beach Fire Department to provide for current and future fire and public safety service demands for the next 50 years.
6. Provide a fire station that is complimentary with the context of the surrounding uses and structures.
7. Design a new fire station that is energy efficient and of high-quality design.

The proposed project would have the following benefits:

1. Provision of a safe and healthy workplace for the Fire Station No. 9 crewmembers.
2. Restoration of operations of Fire Station No. 9 within its service area in order to help meet the Long Beach Fire Department response time goals.
3. Provision of enhanced emergency response services from this new Fire Station facility, with the additional capacity to house a reserve Type 3 engine in the apparatus bay and a fire truck in the rear of the station.

3.4.2 Station Building

The proposed project's core facilities would accommodate eight on-duty personnel.

The station building's 5,600 sf first level would include:

- Three drive-through apparatus bays;
- Apparatus support spaces, including a workshop, medical storage and clean-up, turnout storage, and related janitorial facilities; and
- A public lobby, meeting room, restroom, and a station office.

The station building's 7,180 sf second level would include:

- Offices for the battalion chief and captains;
- Kitchen, storage pantry, dining area, dayroom, and laundry room;

- Private sleeping quarters with unisex restrooms;
- Mechanical, electrical, and communications rooms; and
- Vertical circulation, including two sets of stairs (gurney compliant) and an elevator.

The building's apparatus bays would be able to accommodate a Type 1 fire engine, a rescue company, and a battalion chief vehicle. The station would have additional storage capacity for a reserve Type 3 engine in the apparatus bay and a fire truck in the rear of the site. The apparatus bays would be sized to allow different combinations of response companies for potential future adaptation.

3.4.3 Exterior Design

Figure 3.5, North and East Building Elevations, and Figure 3.6, South and West Building Elevations, detail the proposed fire station elevations. As shown on Figures 3.5 and 3.6, the overall height of the fire station structure is proposed to be 32 feet (ft), 6 inches. The building exterior would incorporate a mixture of rain-screen systems (metallic and phenolic siding) over a masonry base consisting of metal and wood-like appearances that would be separated by a metal horizontal band in some locations. The eastern elevation along Long Beach Boulevard would have a screened window wall system at an acute corner of the building that would invite the public into the first level and provide natural light at the battalion chief work area on the second level. The building's massing would be articulated with vertical corner elements, horizontal wood banding, and the acute corner created by the street configuration. The building's eastern façade would feature an extended roof. The fire station's front door to Long Beach Boulevard would have a red metal screen wall system. All roof-mounted equipment would be shielded by a mechanical screen. The apparatus bays facing East Randolph Place would be outfitted with stainless-steel high-speed roll-up doors placed in a red frame. The fenestration would include a mixture of storefront systems and aluminum clad wood windows at the sleeping rooms.

3.4.4 Landscaping

A row of existing mature trees along the western boundary of the project site would be protected in place. Any trees that would be removed from the eastern border of the project site would be relocated off site. The balance of the project's landscaping would adhere to the City's landscape design requirements and would include drought-tolerant plants and low-flow irrigation systems. The landscape design would be suitable for bio-retention basins, as appropriate. The proposed project would include a low-volume subsurface drip irrigation system, employing a combination of sub-surface in-line drip, point source drip, deep watering root bubblers, and low-volume matched precipitation overhead spray, as appropriate. The irrigation system would be separated into hydrozones based on the water needs of specific plants, with several water-saving measures included in the irrigation control system, such as a weather sensor that would collect evapotranspiration data. Planting areas under the roof cover of the proposed building would not be considered pervious surface area because of the shelter provided from the impervious roof covering.

3.4.5 Outdoor Lighting

All outdoor lighting would consist of light-emitting diode (LED) fixtures that would be directed downward to avoid light spill onto adjacent properties. Three pole lighting fixtures would be installed in the parking area. Wall lighting sconces would be located between the apparatus bays on the fire station's southern and northern elevations. Additional light fixtures would be installed along the various elevations of building.

3.4.6 Off-Site Improvements

Off-site improvements would include a new driveway apron from the proposed parking lot to Long Beach Boulevard. The sidewalks along the Long Beach Boulevard and East Randolph Place frontages would be replaced and the existing street trees protected in place or relocated, as necessary. A response driveway would be installed from the fire station to East Randolph Place, with "Keep Clear" zones striped in front of the apparatus bay on East Randolph Place and in the Long Beach Boulevard/East Randolph Place intersection. As noted above, three new traffic signals would be installed at the intersection of East Randolph Place and on Long Beach Boulevard. The new traffic signals would include pedestrian crosswalks and would eliminate any parking within the intersection.

The alley on the north side of the project site would be widened by 2 ft, 6 inches, toward the proposed fire station and would be reconstructed with underground utilities and new pavement. The widening would be required to allow apparatus to enter the project site via the alley. The total improvement area of the alley would be 3,064 sf.

3.4.7 Infrastructure Improvements

The following infrastructure improvements would be included as part of the project:

- **Water.** The project would install on-site water lines that would connect to an existing 4-inch water distribution line in the alley northwest of the project site.
- **Fire Line Service.** The project would install an 8-inch ductile iron water main from the existing 12-inch water main on Long Beach Boulevard to the project site.
- **Sewer.** The project would install on-site sewer lines that would connect to an existing 8-inch sewer line in the east lane of Long Beach Boulevard.
- **Drainage.** Similar to existing conditions, stormwater runoff on the project site would drain toward Long Beach Boulevard. The proposed project's drainage design would comply with Standard Urban Storm Water Mitigation Plan (SUSMP) requirements and the City would pay an in-lieu fee in conformance with its Low Impact Development (LID) Code. The proposed project would provide an equipment wash down area on the north side of the fire station.
- **Dry Utilities.** Dry utilities, including natural gas, electrical, and telecommunications services, would be provided to the site from existing infrastructure available in the alley northwest of the project site and along Long Beach Boulevard. The proposed project would connect to the existing infrastructure through established utility easement agreements. The proposed project

would underground the existing overhead electrical lines along the project site's Long Beach Boulevard frontage.

A trash enclosure and power transformer would be located adjacent to the alley on the northwest corner of the project site. A new wharf-type fire hydrant would be located in the northern section of the parking lot.

3.4.8 Operational Characteristics

The fire station would be equipped to house eight on-duty firefighters in a 24-hour shift in addition to a trainee. Personnel would be on site 24 hours per day, with a daily shift change at 7:00 a.m.

The station's apparatus would use sirens when entering all intersections while responding to emergency calls; however, to avoid subjecting surrounding residences to excessive noise, sirens would only be used by exiting apparatus if there were vehicles driving on the street in the immediate vicinity of the station. In addition, as a courtesy to the residents in the surrounding vicinity, station apparatus would minimize the use of the sirens at night and during sleeping hours, and sirens and horns would not be tested during the morning checks. Sirens would not be used in the alley on the northwest side of the project site.

3.4.9 Project Design Features

The proposed project would be designed to comply with the water efficiency and energy conservation requirements included in the California Building Standards Code (California Code of Regulations [CCR], Title 24).

The project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification and would include solar panels on the roof, low-flow plumbing fixtures, LED lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce heating and cooling costs.

3.4.10 Best Management Practices

The proposed project would implement various Best Management Practices (BMPs) as part of the project design, including construction activity as well as stormwater and erosion control BMPs. These BMPs are summarized below.

3.4.10.1 Construction Activity BMPs

Standard BMPs would be implemented for the following construction activities:

- Water conservation practices to reduce the discharge of pollutants off site;
- Material delivery, storage, and use;
- Prevention, containing, and cleaning up spills;
- Managing solid and hazardous waste;

- Concrete waste management to reduce the discharge of Portland cement, concrete slurry, and asphalt; and
- Vehicle and equipment cleaning and maintenance.

3.4.10.2 Stormwater Control BMPs

Stormwater Control BMPs would be implemented for the following activities during operations:

- Non-stormwater discharges to drains;
- Vehicle and equipment washing and steam cleaning;
- Vehicle and equipment maintenance and repair;
- Outdoor loading and unloading of materials;
- Outdoor container storage of liquids;
- Outdoor processing equipment;
- Outdoor storage of raw materials;
- Waste handling and disposal;
- Building and grounds maintenance;
- Building repair, remodeling, and construction;
- Over-water activities; and
- Employee training.

3.4.10.3 Erosion Control BMPs

The following erosion control BMPs would be implemented during construction:

- A silt fence;
- A stabilized construction entrance;
- Dust controls;
- Construction sequencing;
- Sandbag barriers; and
- A temporary sediment basin.

3.5 PROJECT IMPLEMENTATION

Development of the proposed project would require demolition of the existing structures on the project site; excavation and grading of the site; delivery of materials and personnel; construction of the building area and parking lot; widening of the alleyway; the addition of three new traffic signals at the Long Beach Boulevard and East Randolph Place intersection; and landscaping of the project site. Construction of the proposed project is anticipated to commence in late 2022 and take

approximately 16 months. Construction staging would occur at the northeast side of the project site where the proposed parking lot would be located.

Based on the preliminary grading plans, approximately 45 cubic yards of fill material would be required to be imported to the project site. Demolition, grading, and building activities would involve the use of standard earthmoving equipment such as large excavators, cranes, and other related equipment.

3.6 DISCRETIONARY ACTIONS, PERMITS, AND OTHER APPROVALS

In accordance with Sections 15050 and 15367 of the *State CEQA Guidelines*, the City is the designated Lead Agency for the proposed project and has principal authority and jurisdiction for CEQA actions and project approval. Responsible Agencies are those agencies that have jurisdiction or authority over one or more aspects associated with the development of a proposed project and/or mitigation. Trustee Agencies are State agencies that have jurisdiction by law over natural resources affected by a proposed project.

The discretionary actions to be considered by the City as a part of the proposed project include:

- Certification of the EIR;
- Site Plan Review;
- Standards Variance;
- A General Plan Amendment (GPA) to change the PlaceType designation for the project site to Neighborhood Serving Center or Corridor Low Density (NSC-L);
- A Zoning Amendment to change the zoning designation on the project site to Mixed Use (MU-1); and
- Lot merger of the existing parcels on the project site.

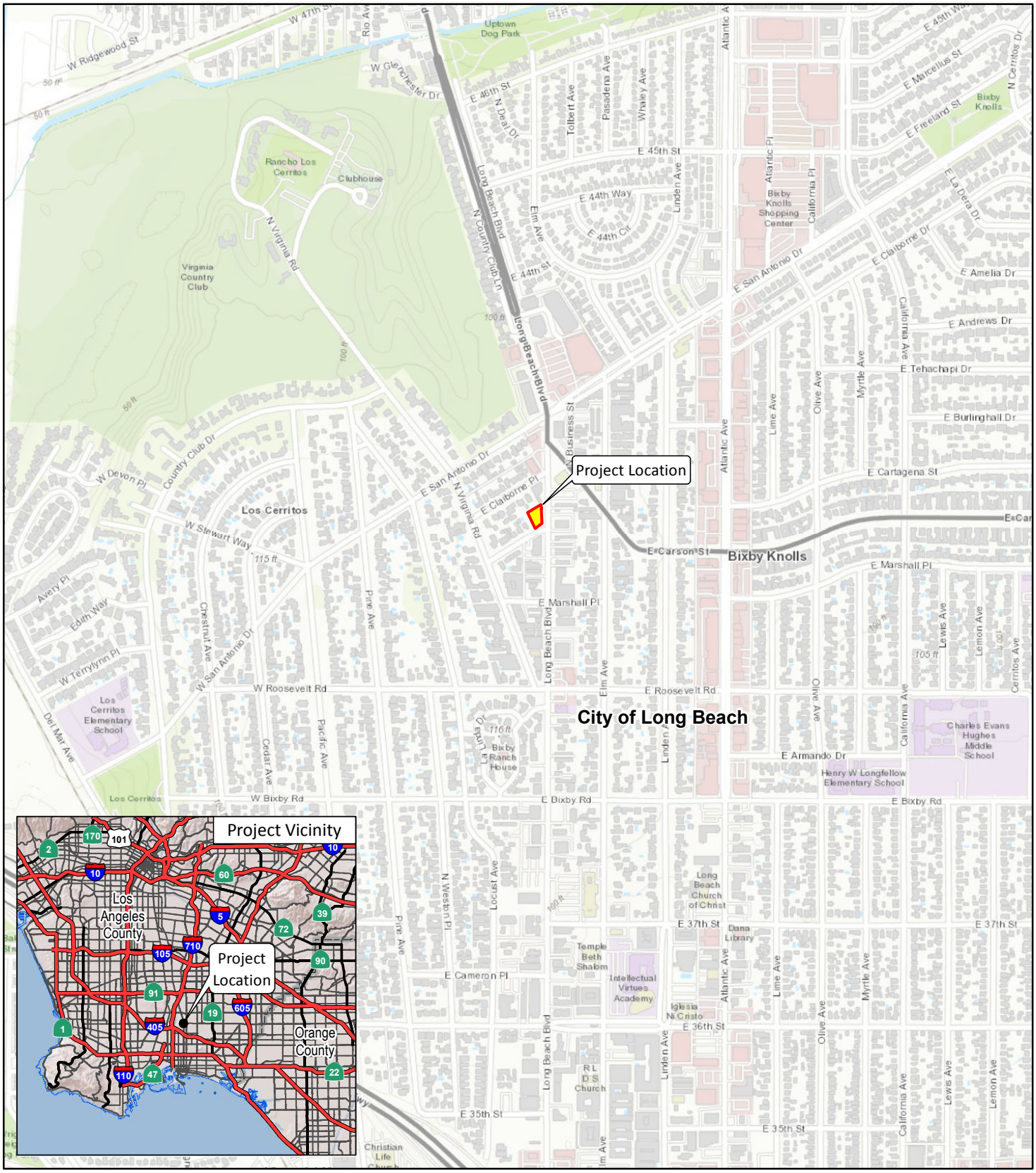

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FIGURE 3.1

Fire Station No. 9 Project

Regional Location

SOURCE: ArcGIS Online Topographic Map

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LSA

LEGEND

Project Site

FIGURE 3.2

0 50 100

FEET

SOURCE: Google Earth 2021

Fire Station No. 9 Project

Surrounding Land Uses

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LEGEND

Project Site

FIGURE 3.3

N

0 75 150

FEET

SOURCE: Google Maps 2021

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Fire Station No. 9 Project

Existing Project Site Plan

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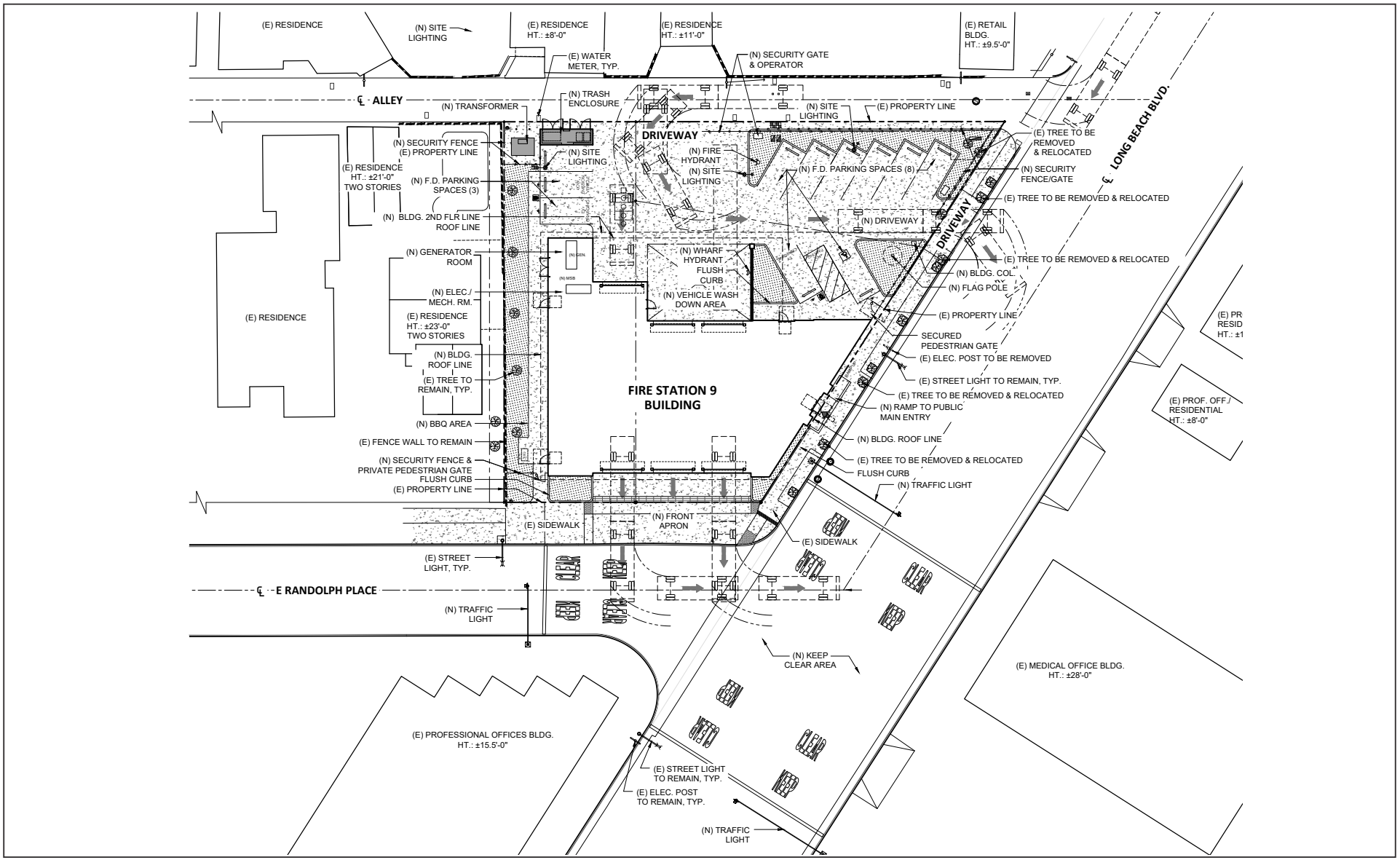

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FIGURE 3.4

N

0 16 32

FEET

SOURCE: Mary Mcgrath Architects

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Fire Station No. 9 Project

Conceptual Site Plan

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1 **NORTH ELEVATION**
1/8" = 1'-0"

2 **EAST ELEVATION**
1/8" = 1'-0"

LSA

FIGURE 3.5

0 16 32
FEET

SOURCE: Mary Mcgrath Architects

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Fire Station No. 9 Project

North and East Building Elevations

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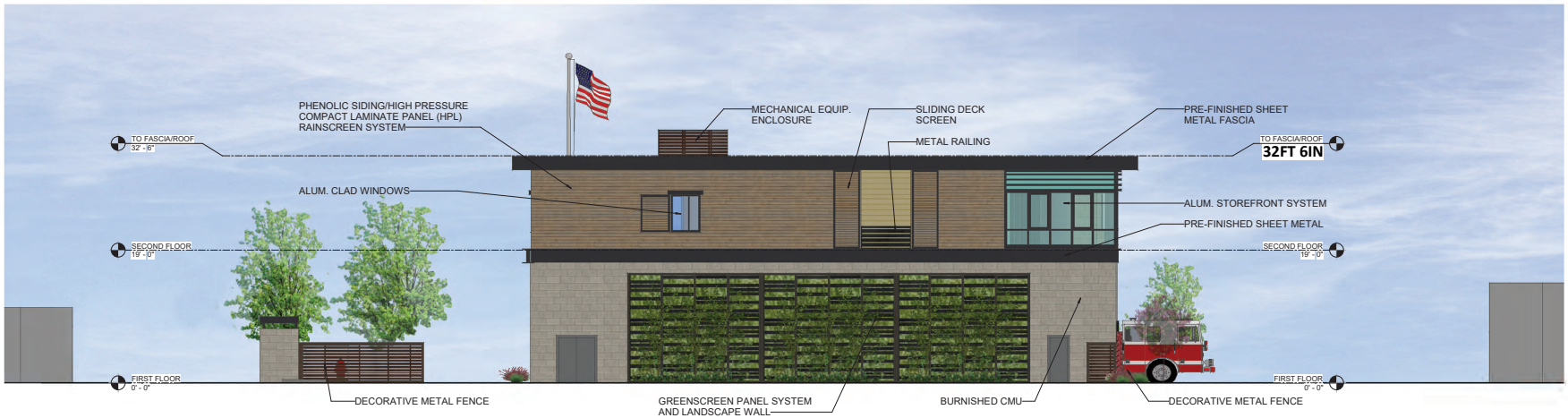
1 **SOUTH ELEVATION**
1/8" = 1'-0"



2 **WEST ELEVATION**
1/8" = 1'-0"

LSA

FIGURE 3.6

0 16 32
FEET

SOURCE: Mary Mcgrath Architects

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Fire Station No. 9 Project

South and West Building Elevations

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4.0 EXISTING ENVIRONMENTAL SETTING, ENVIRONMENTAL ANALYSIS, IMPACTS, AND MITIGATION MEASURES

OVERVIEW

The following chapter contains eight sections, each of which addresses one environmental topic outlined in Appendix G of the Guidelines for the California Environmental Quality Act (*State CEQA Guidelines*) (California Code of Regulations [CCR] Title 14, Chapter 3, Sections 15000–15397).

For each environmental impact issue analyzed, the Draft Environmental Impact Report (EIR) includes a detailed explanation of the existing conditions, thresholds of significance that will be applied to determine whether the proposed Fire Station No. 9 at 4101 Long Beach Boulevard (proposed project) impacts are significant or less than significant, analysis of the environmental impacts, and a determination of whether the proposed project would have a significant impact if implemented. A "significant impact" or "significant effect" means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (14 CCR 15382). Each of the environmental topic sections in Chapter 4.0 also includes a discussion of the cumulative effects of the proposed project when considered in combination with other projects causing related impacts, as required by Section 15130 of the *State CEQA Guidelines*.

Each of the eight environmental sections is organized into the following subsections:

1. **Introduction** briefly describes the topics and issues covered in the section.
2. **Scoping Process** describes the comment letters received during the public review period of the Initial Study/Notice of Preparation (IS/NOP) that are related to the topic.
3. **Existing Environmental Setting** describes the physical conditions that existed at the time the Notice of Preparation was prepared. This section focuses on physical site characteristics that are relevant to the environmental topic being analyzed.
4. **Regulatory Setting** lists and discusses the laws, ordinances, regulations, and policies that relate to the specific environmental topic and how they apply to the proposed project.
5. **Methodology** describes the approach and methods employed to complete the environmental analysis for the issue under investigation.
6. **Thresholds of Significance** provides the thresholds that are the basis of the conclusions of significance, which are based on the criteria in Appendix G of the *State CEQA Guidelines*.
7. **Project Impacts** describes the potential environmental changes to the existing physical conditions that may occur if the proposed project is implemented. Evidence is presented to show the cause-and-effect relationship between the proposed project and potential changes in the environment. The exact magnitude, duration, extent, frequency, and range or other parameters of a potential impact are ascertained to the extent feasible to determine whether impacts may be significant.
8. **Level of Significance Prior to Mitigation** describes the significance of potential impacts prior to implementation of mitigation measures.

9. **Compliance Measures** (CMs) are specific standards imposed by the approving agency and are required of the proposed project to reduce its potential environmental effects. Because these features are regulatory, and therefore required, they do not constitute mitigation measures.
10. **Mitigation Measures** (MMs) are project-specific measures that would be required for the project to avoid, minimize, rectify, reduce, eliminate, or compensate for a potentially significant adverse impact.
11. **Level of Significance after Mitigation** describes the significance of potential impacts after implementation of mitigation measures. Potential significant unavoidable impacts are clearly stated in this section.
12. **Cumulative Impacts** refers to potential environmental changes to the existing physical conditions that may occur as a result of project implementation together with other reasonably foreseeable, planned, and approved future projects producing related impacts. Section 15355 of the *State CEQA 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 may result from individually minor but collectively significant projects taking place over a period of time. For each of the environmental topics considered in this Draft EIR, the geographic scope of the cumulative analysis is also defined.

4.1 AIR QUALITY

This section has been prepared for the proposed Fire Station No. 9 (proposed project) using methodologies and assumptions recommended in the air quality impact assessment guidelines of the South Coast Air Quality Management District (SCAQMD) in its *California Environmental Quality Act (CEQA) Air Quality Handbook*[1], and associated updates. In keeping with these guidelines, this section describes existing air quality and evaluates short-term impacts during construction, long-term emissions associated with operation, and how potential impacts correlate to human health. Air quality modeling data are included in Appendix C.

4.1.1 Scoping Process

The City of Long Beach (City) received 5 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix B of this Draft Environmental Impact Report (EIR). No comment letters included comments related to air quality.

4.1.2 Methodology

The proposed project would result in criteria pollutant emissions from construction and operational sources. Construction activities would generate emissions at the site from off-road construction equipment, and on roadways as a result of construction-related truck hauling, vendor deliveries, and worker commuting. Operational emissions are typically associated with mobile sources (e.g., vehicle and truck trips), energy sources (e.g., electricity and natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment) related to the proposed project. This analysis uses the California Emissions Estimator Model version 2020.4.0 (CalEEMod) to quantify criteria pollutant emissions for both construction and operation of the proposed project. CalEEMod output is contained in Appendix C.

4.1.3 Existing Environmental Setting

The City is part of the South Coast Air Basin (SCAB) and is under the jurisdiction of SCAQMD. Background information about air pollutants and health effects, climate, meteorological conditions, and regional air quality conditions in the SCAB and local air quality conditions in the vicinity of the project site is provided below.

4.1.3.1 Air Pollutants and Health Effects

Both State and federal governments have established health-based ambient air quality standards for six criteria air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors)

[1] South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook.* Website: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993), (accessed November 2021).

affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the planning area are O_3, CO, and suspended particulate matter. Significance thresholds established by an air quality district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_X) and reactive organic gases (ROG).

Further, by its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to by itself result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, the air quality districts have considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise. These populations are referred to as sensitive receptors.

Air pollutants and their health effects, and other air pollution-related considerations are summarized in Table 4.1.A and are described in more detail below.

Table 4.1.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	• Precursor sources:[1] motor vehicles, industrial emissions, and consumer products.	• Respiratory symptoms. • Worsening of lung disease leading to premature death. • Damage to lung tissue. • Crop, forest, and ecosystem damage. • Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.
Particulate Matter Less than 2.5 Microns in Diameter ($PM_{2.5}$)	• Cars and trucks (especially diesels). • Fireplaces, woodstoves. • Windblown dust from roadways, agriculture, and construction.	• Premature death. • Hospitalization for worsening of cardiovascular disease. • Hospitalization for respiratory disease. • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage.
Particulate Matter Less than 10 Microns in Diameter (PM_{10})	• Cars and trucks (especially diesels). • Fireplaces, woodstoves. • Windblown dust from roadways, agriculture, and construction.	• Premature death and hospitalization, primarily for worsening of respiratory disease. • Reduced visibility and material soiling.
Nitrogen Oxides (NO_X)	• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	• Lung irritation. • Enhanced allergic responses.
Carbon Monoxide (CO)	• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	• Chest pain in patients with heart disease. • Headache. • Light-headedness. • Reduced mental alertness.
Sulfur Oxides (SO_X)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits.
Lead (Pb)	• Contaminated soil.	• Impaired mental functioning in children. • Learning disabilities in children. • Brain and kidney damage.
Toxic Air Contaminants (TACs)	• Cars and trucks (especially diesels). • Industrial sources, such as chrome platers. • Neighborhood businesses, such as dry cleaners and service stations. • Building materials and products.	• Cancer. • Reproductive and developmental effects. • Neurological effects.

Source: California Air Resources Board (2018).

[1] Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

Ozone. Ozone (O_3) is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NO_X. The main sources of ROG and NO_x, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. Automobiles are typically the largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors

are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide. CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. CO transport is limited – it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

Particulate Matter. Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from humanmade and natural sources. Particulate matter is categorized in two size ranges: PM_{10}, for particles less than 10 microns in diameter, and $PM_{2.5}$, for particles less than 2.5 microns in diameter. Motor vehicles are the primary generators of particulates, through tailpipe emissions as well as brake pad, tire wear, and entrained road dust. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children.[2] Statewide attainment of particulate matter standards could reduce premature deaths, hospital admissions for cardiovascular and respiratory disease, asthma-related emergency room visits, and episodes of respiratory illness in California.

Nitrogen Dioxide. NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide. SO_2 is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of

[2] California Air Resources Board (CARB). 2020. *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10})*. Website: ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed November 2021).

acute and chronic respiratory disease. SO_2 also reduces visibility and the level of sunlight at the ground surface.

Lead. Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the United States Environmental Protection Agency (USEPA) established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of USEPA regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Some examples of TACs include: benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the USEPA, CARB, and the SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines.[3] High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways.

The CARB Diesel Risk Reduction Plan is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel—a step already implemented—and cleaner-burning diesel engines.[4] The technology for reducing diesel

[3] CARB. 2000a. *Fact Sheet – California's Plan to Reduce Diesel Particulate Matter Emissions*. October. Website: www.arb.ca.gov/diesel/factsheets/rrpfactsheet.pdf (accessed November 2021).

[4] CARB. 2000b. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October. Prepared by the Stationary Source Division and Mobile Source Control Division. Website: www.arb.ca.gov/diesel/documents/rrpFinal.pdf (accessed November 2021).

particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions.

High Volume Roadways. Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of intra-urban spatial variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

4.1.3.2 National and State Ambient Air Quality Standards

Both State and federal governments have established health-based ambient air quality standards for criteria air pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the USEPA and the CARB have established ambient air quality standards for the following common pollutants: CO, O_3, NO_2, SO_2, Pb, and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These ambient air quality standards are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.[5] State and federal standards for the criteria air pollutants are listed in Table 4.1.B.

4.1.3.3 Existing Climate and Air Quality

The following provides a discussion of the local and regional air quality and climate in the City of Long Beach.

[5] United States Environmental Protection Agency (USEPA). 2017. Criteria Air Pollutants. October. Website: www.epa.gov/criteria-air-pollutants (accessed November 2021).

Table 4.1.B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	–		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	–	
Lead (Pb)[12,13]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average [i]	–		0.15 µg/m³		
Sulfur Dioxide (SO_2)[11]	24-Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Visibility-Reducing Particles [12]	8-Hour	See footnote [14]	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride [10]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: Ambient Air Quality Standards (California Air Resources Board 2016b).

Table notes continued on the following page

[1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.

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

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

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

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

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

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

[9] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24- hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

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

[11] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the three-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

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

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

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
USEPA = United States Environmental Protection Agency

Climate and Meteorology. Air quality in Long Beach is affected by various emission sources (e.g., mobile and industry) as well as atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine,

and emissions from the second largest urban area in the United States gives the South Coast Air Basin (Basin) some of the highest pollutant concentrations in the country.

The annual average temperature varies throughout the Basin, ranging from the low- to middle-60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas, including the City of Long Beach, show less variability in annual minimum and maximum temperatures than inland areas. December is typically the coldest month, and July and August are typically the warmest months in this area of the Basin.[6]

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunderstorms in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The monthly average rainfall in Long Beach typically varies from 2.90 inches in January February to 0.02 inch in July with an annual total of 12.01 inches.[7] Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high, which is the semi-permanent high-pressure area of the north Pacific Ocean and is the dominating factor in California weather. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in Long Beach blow predominantly from the west–northwest, with relatively low velocities.[8] Wind speeds in Long Beach average between 7 miles per hour (mph) and 4 mph. Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north, or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months and disperse air contaminants. The Santa Ana conditions tend to last for several days at a time.[9]

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollution concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and NO_x because of extremely low

6 Western Regional Climate Center. 2015. Website: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5085 (accessed November 2021).

7 Ibid.

8 Iowa Environmental Mesonet. 2021. Windrows. Website: https://mesonet.agron.iastate.edu/sites/windrose.phtml?—network=CA_—ASOS&station=LGB (accessed November 2021).

9 Ibid.

inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog or ozone.

Attainment Status. CARB is required to designate areas of the State as attainment, nonattainment, or unclassified for all State standards. An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A nonattainment designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An unclassified designation signifies that data do not support either an attainment or nonattainment status. The California Clean Air Act (CCAA) divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as one of the following: does not meet the primary standards, or cannot be classified, or better than national standards. For SO_2, areas are designated as: does not meet the primary standards, does not meet the secondary standards, cannot be classified, or better than national standards. Table 4.1.C provides a summary of the attainment status for the Basin with respect to National Ambient Air Quality Standards (NAAQS) and California Environmental Air Quality Standards (CAAQS).

Table 4.1.A: South Coast Air Basin Attainment Status

Pollutant	State	Federal
O_3 1 hour	Nonattainment	Extreme Nonattainment
O_3 8 hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	N/A	Attainment/Unclassified
Lead	Attainment	Partial Nonattainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: South Coast Air Quality Management District (2016b).

[1] Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect redesignation to attainment based on current monitoring data.

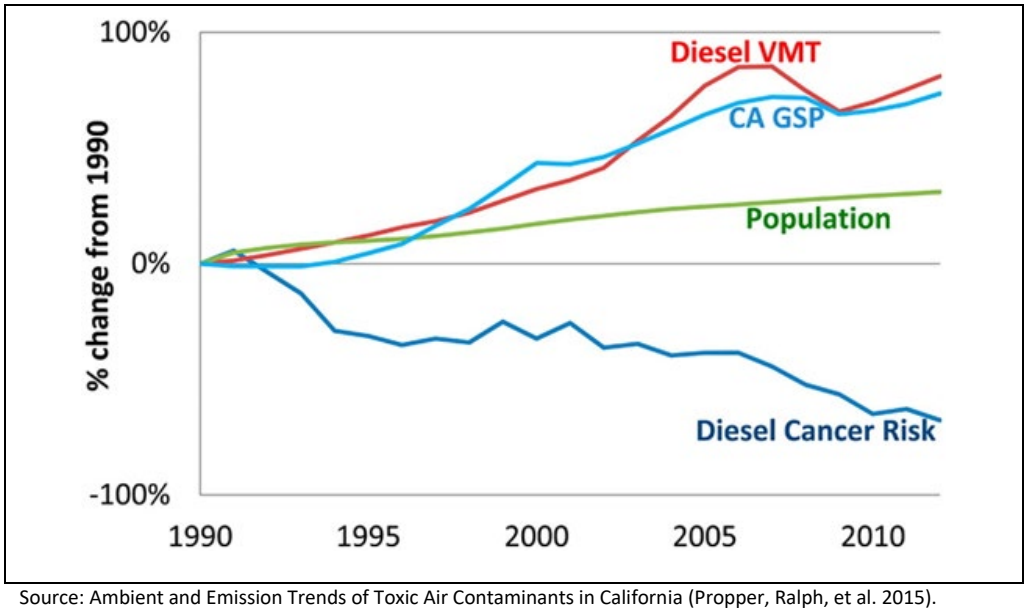
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SO_2 = sulfur dioxide

Air Quality Monitoring Results. Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring stations closest to and within the project area are the 2425 Webster Street ambient air quality monitoring station, the 1710 E. 20th Street ambient air quality monitoring station, and the 1305 E. Pacific Coast Highway ambient air quality monitoring station in Long Beach, because they monitor the most air pollutant data in the City.

Pollutant monitoring results for years 2018 to 2020 at the Long Beach ambient air quality monitoring stations, shown in Table 4.1.D, indicate that air quality in the vicinity of the City has generally been good. As indicated in the monitoring results, the federal PM_{10} standard had no exceedances in 2018, one exceedance in 2019, and no exceedances in 2020. The State PM_{10} standard was exceeded four times in 2018, four times in 2019, and three times in 2020. $PM_{2.5}$ levels exceeded the federal standard seven times in 2018, with no exceedances in 2019, and ten exceedances in 2020. Neither State nor federal 1-hour ozone standards nor the State 8-hour ozone standards were exceeded in 2018 or 2019, but both the State and federal ozone 1-hour and 8-hour standards were exceeded four times in 2020. In addition, the CO, SO_2, and NO_2 standards were also not exceeded in this area during the 3-year period.

Toxic Air Contaminant Trends. In 1984, the CARB adopted regulations to reduce TAC emissions from mobile and stationary sources, as well as consumer products. A CARB study showed that ambient concentrations and emissions of the seven TACs responsible for the most cancer risk from airborne exposure declined by 76 percent between 1990 and 2012.[10] Concentrations of diesel particulate matter, a key TAC, declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled (VMT), as shown on Figure 4.1-1, below. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.

Figure 4.1-1: California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context



Source: Ambient and Emission Trends of Toxic Air Contaminants in California (Propper, Ralph, et al. 2015).

[10] Propper, Ralph, Patrick Wong, Son Bui, Jeff Austin, William Vance, Álvaro Alvarado, Bart Croes, and Dongmin Lu. 2015. Ambient and Emission Trends of Toxic Air Contaminants in California. *American Chemical Society: Environmental Science & Technology*. Website: pubs.acs.org/doi/full/10.1021/acs.est.5b02766 (accessed November 2021).

Table 4.1.B: Ambient Air Quality at the Long Beach Monitoring Stations

Pollutant	Standard	2018	2019	2020
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		4.7	3.0	ND
Number of days exceeded:	State: > 20 ppm	0	0	ND
	Federal: > 35 ppm	0	0	ND
Maximum 8-hour concentration (ppm)		2.1	2.1	ND
Number of days exceeded:	State: > 9 ppm	0	0	ND
	Federal: > 9 ppm	0	0	ND
Ozone (O_3)[1]				
Maximum 1-hour concentration (ppm)		0.074	0.075	0.105
Number of days exceeded:	State: > 0.09 ppm	0	0	4
Maximum 8-hour concentration (ppm)		0.063	0.068	0.083
Number of days exceeded:	State: > 0.07 ppm	0	0	4
	Federal: > 0.07 ppm	0	0	4
Coarse Particulates (PM_{10})				
Maximum 24-hour concentration (µg/m³)		84.0	155.8	61.6
Number of days exceeded:	State: > 50 µg/m³	4	4	3
	Federal: > 150 µg/m³	0	1	0
Annual arithmetic average concentration (µg/m³)		32.5	29.5	31.8
Exceeded for the year:	State: > 20 µg/m³	Yes	Yes	Yes
	Federal: > 50 µg/m³	No	No	No
Fine Particulates ($PM_{2.5}$)[2]				
Maximum 24-hour concentration (µg/m³)		77.3	31.2	72.6
Number of days exceeded:	Federal: > 35 µg/m³	7	0	10
Annual arithmetic average concentration (µg/m³)		11.6	10.6	12.2
Exceeded for the year:	State: > 12 µg/m³	No	No	Yes
	Federal: > 15 µg/m³	No	No	No
Nitrogen Dioxide (NO_2)[1]				
Maximum 1-hour concentration (ppm)		0.085	0.082	0.075
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.017	0.016	0.013
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)				
Maximum 1-hour concentration (ppm)		0.011	0.009	ND
Number of days exceeded:	State: > 0.25 ppm	0	0	ND
Maximum 24-hour concentration (ppm)		0.002	0.002	ND
Number of days exceeded:	State: > 0.04 ppm	0	0	ND
	Federal: > 0.14 ppm	0	0	ND
Annual arithmetic average concentration (ppm)		0.0009	0.0007	ND
Exceeded for the year:	Federal: > 0.030 ppm	No	No	ND

Sources: CARB (2021) and USEPA (2021).

[1] 2018 and 2019 data were taken from the 2425 Webster Street Long Beach monitoring station, and 2020 data were taken from the 1710 E. 20th Street Long Beach monitoring station.

[2] Data were taken from the 1305 E. Pacific Coast Highway Long Beach monitoring station.

µg/m³ = micrograms per cubic meter
CARB = California Air Resources Board
ND = No data. There were insufficient (or no) data to determine the value.
ppm = parts per million
USEPA = United States Environmental Protection Agency

The USEPA and the CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

4.1.4 Regulatory Setting

The USEPA and CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

The applicable federal, State, regional, and local regulatory framework is discussed below.

4.1.4.1 Federal Regulations

Federal Clean Air Act. At the federal level, the USEPA has been charged with implementing national air quality programs. The USEPA air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required the USEPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The USEPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAA and determine if implementation will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area, which imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin.

The USEPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those which may reasonably be anticipated to result in increased deaths or serious illness, and which are not already regulated. An independent science advisory board reviews the health and exposure analyses conducted by the USEPA on suspected hazardous pollutants prior to regulatory development.

4.1.4.2 State Regulations

California Clean Air Act. In 1988, the California Clean Air Act (CCAA) required that all air quality districts in the State endeavor to achieve and maintain CAAQS for carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each

nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

California Air Resources Board. The CARB is the State's "clean air agency." The CARB's goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

Assembly Bill 2588 Air Toxics "Hot Spots" Information and Assessment Act. Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances that their facilities routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook. CARB has developed an Air Quality and Land Use Handbook[11] (CARB Handbook) (2005), which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land use designations with air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 ft of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 ft of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 ft of any dry cleaning operation (for operations with two or more machines, provide 500 ft); and
- Within 300 ft of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

[11] CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB Handbook). April.

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to further examine project sites for actual health risk associated with the location of new sensitive land uses.

4.1.4.3 Regional Regulations

South Coast Air Quality Management District. The SCAQMD has jurisdiction over most air quality matters in the South Coast Air Basin (Basin). This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. Los Angeles County is a subregion of the SCAQMD jurisdiction. The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin and is tasked with implementing certain programs and regulations required by the Federal Clean Air Act (FCAA) and the California Clean Air Act (CCAA). The SCAQMD prepares plans to attain State and national ambient air quality standards (NAAQS). SCAQMD is directly responsible for reducing emissions from stationary (area and point) sources. The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures though educational programs or fines, when necessary.

- **Regulation IV - Prohibitions:** This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air pollutant emissions, fuel contaminants, start-up/shutdown exemptions, and breakdown events.

    - **Rule 402 - Nuisance:** This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance, or annoyance to businesses, property, or the public. The proposed project will be required to comply with Rule 402.

    - **Rule 403 - Fugitive Dust:** This rule requires the prevention, reduction, or mitigation fugitive dust emissions from a project site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM_{10} emissions to less than 50 $\mu g/m^3$ and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to utilize one or more of the best available control measures (identified in the tables within the rule). Control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, Rule 403 requires that a contingency plan be prepared if so determined by the USEPA. In addition, SCAQMD Rule 403(e), Additional Requirements for Large Operations, includes requirements to provide Large Operation Notification Form 403 N, appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control training class in the South Coast Air Basin. The proposed project will be required to comply with Rule 403.

- **Regulation XI - Source Specific Standards:** Regulation XI sets emissions standards for different sources.
    - **Rule 1113 - Architectural Coatings:** This rule limits the amount of volatile organic compounds (VOCs) from architectural coatings and solvents, which lowers the emissions of odorous compounds. The proposed project will be required to comply with Rule 1113.

The SCAQMD is responsible for demonstrating regional compliance with ambient air quality standards but has limited direct involvement in reducing emissions from fugitive, mobile, and natural sources. To that end, the SCAQMD works cooperatively with CARB, SCAG, county transportation commissions, local governments, and other federal and State government agencies. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs) to meet the CAAQS and NAAQS. SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the South Coast Air Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. Every several years, SCAQMD prepares a new AQMP, updating the previous plan and the 20-year horizon.[12] The *Final 2016 Air Quality Management Plan* is the currently adopted AQMP. Key elements of the Final 2016 AQMP include the following:

- Calculating and taking credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)
- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives
- Seeking new partnerships and significant funding for incentives to accelerate deployment of zero-emission and near-zero emission technologies
- Enhanced socioeconomic assessment, including an expanded environmental justice analysis
- Attainment of the 24-hour $PM_{2.5}$ standard in 2019 with no additional measures
- Attainment of the annual $PM_{2.5}$ standard by 2025 with implementation of a portion of the O_3 strategy
- Attainment of the 1-hour O_3 standard by 2022 with no reliance on "black box" future technology (Federal Clean Air Act [FCAA] Section 182(e)(5) measures)

Southern California Association of Governments. SCAG is a council of governments for Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. It is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy and community development, and the environment. SCAG is the federally designated Metropolitan Planning

[12] South Coast Air Quality Management District (SCAQMD). 2016a. *Final 2016 Air Quality Management Plan.* March.

Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG prepares the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP), which address regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within local jurisdictions.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's Regional Comprehensive Plan (RCP) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the SCAQMD. The RCP is a framework for decision-making for local governments, assisting them in meeting federal and State mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes. Policies within the RCP include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

On April 7, 2016, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Using growth forecasts and economic trends, the RTP provides a vision for transportation throughout the region for the next 20 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The SCS is a newly required element of the RTP, which integrates land use and transportation strategies to achieve CARB emissions reduction targets. The inclusion of the SCS is required by Senate Bill (SB) 375, which was enacted to reduce greenhouse gas (GHG) emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The RTP/SCS would successfully achieve and exceed the GHG emission-reduction targets set by CARB by achieving an 8 percent reduction by 2020, an 18 percent reduction by 2035, and a 21 percent reduction by 2040 compared to the 2005 level on a per capita basis. This RTP/SCS also meets criteria pollutant emission budgets set by the USEPA.

SCAG recently adopted an updated strategy, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal) on September 3, 2020. Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal is an important planning document for the region, allowing project sponsors to qualify for federal funding and takes into account operations and maintenance costs, to ensure reliability, longevity, and cost effectiveness.

Connect SoCal, the updated 2020–2045 RTP/SCS, was adopted by SCAG in September 2020. While this version is the most up-to-date, the 2016–2040 RTP/SCS was the applicable plan at the time that the City's emissions inventory was undertaken.

4.1.4.4 Local Regulations

City of Long Beach General Plan Air Quality Element (1996). The adopted City of Long Beach General Plan addresses air quality in the Air Quality Element and contains goals and policies and actions in relation to government organization roles and responsibilities, ground transportation, air transportation, land use, particulate emissions, energy conservation, and education. The following goals and policies related to air quality are presented in the Air Quality Element[13] and are applicable to the proposed project:

GOAL 1: Effective coordination of air quality improvement efforts in the South Coast Air Basin, the Southeast Los Angeles County (SELAC) subregion of SCAG, and other agencies.

- **Policy 1.1:** Establish a Coordinated Approach. Coordinate with other jurisdictions in the South Coast Air Basin a continuation of the consortium to establish air quality plans and implementation programs where practical.

- **Policy 1.2:** Encourage Community Participation. Involve environmental groups, the business community, special interests, and the general public in the formulation and implementation of programs that effectively reduce airborne pollutants.

GOAL 2: A diverse and efficient ground transportation system that minimizes air pollutant emissions.

- **Policy 2.1.1:** Reduce Vehicle Trips. Use incentives, regulations, and transportation demand management techniques, in cooperation with other jurisdictions in the South Coast Air Basin to eliminate vehicle trips that would otherwise occur.

- **Policy 2.1.2:** Reduce Vehicle Miles Traveled. Use incentives, regulations, and transportation demand management in cooperation with other jurisdictions in the South Coast Air Basin, to reduce vehicle miles traveled.

GOAL 7: Reduce emissions through reduced energy consumption.

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

- **Policy 7.2:** Recycle Wastes. Promote local recycling of wastes and the use of recycled materials.

City of Long Beach General Plan Land Use Element (2019). The General Plan Land Use Element (LUE)[14] is intended to guide growth and future development through horizon year 2040. Implementation of the LUE is centered on developing and adopting a new set of zones to implement the policy direction of the LUE in order to guide Long Beach to a more sustainable future, improve

[13] City of Long Beach. 1996. Long Beach General Plan. December. Website: https://www.longbeach.gov/lbds /planning/advance/general-plan/ (accessed November 2021).

[14] City of Long Beach. 2019. Long Beach General Plan Land Use Element. December. Website: https://www. longbeach.gov/lbds /planning/advance/general-plan/ (accessed November 2021).

mobility choices, expand transit access, improve air quality, reduce greenhouse gas emissions, and accommodate growth projections, in accordance with State law. The following goals, strategies, and policies related to air quality are presented in the LUE and are applicable to the proposed project.

STRATEGY No. 1: Support sustainable urban development patterns.

- **LU Policy 1-1:** Promote sustainable development patterns and development intensities that use land efficiently and accommodate and encourage walking.
- **LU Policy 1-3:** Require sustainable design strategies to be integrated into public and private development projects.
- **LU Policy 1-4:** Require electric vehicle charging stations to be installed in new commercial, industrial, institutional, and multiple-family residential development projects. Require that all parking for single-unit and two-unit residential development projects be capable of supporting future electric vehicle supply equipment.
- **LU Policy 1-6:** Require that new building construction incorporate solar panels, vegetated surface, high albedo surface, and/or similar roof structures to reduce net energy usage and reduce the heat island effect.

STRATEGY No. 11: Create healthy and sustainable neighborhoods.

- **LU Policy 11-2:** Provide for a wide variety of creative, affordable, and sustainable land use solutions to help resolve air, soil, and water pollution, energy consumption, and resource depletion issues.
- **LU Policy 11-5:** Ensure neighborhoods are accessible to open spaces, parks, trails, and recreational programs that encourage physical activity and walkability.

STRATEGY No. 16: Protect neighborhoods from adverse environmental conditions.

Draft Climate Action and Adaptation Plan. The City of Long is currently preparing a Climate Action and Adaptation Plan (CAAP)[15]. The Draft CAAP is a comprehensive planning document outlining the City's proposed approach both to address climate impacts on Long Beach and to reduce Long Beach's impact on the climate by reducing GHG emissions. The Draft CAAP provides a framework to reduce the City's GHG footprint (climate action) and ensure the community and physical assets are better protected from the impacts of climate change (climate adaptation). The vision of the Draft CAAP is to create a more sustainable, resilient, and equitable city by addressing climate change in a way that remedies existing environmental health disparities while also improving health, quality of life, and enhancing economic vitality throughout Long Beach. The Draft CAAP includes a roadmap for implementing new polices, programs, incentives, requirements, projects, and initiatives in the immediate future, as well as longer-term actions that will need to be studied further while monitoring how the climate continues to change and evaluating the effectiveness of actions taken.

[15] City of Long Beach. 2020. *Draft Climate Action and Adaptation Plan*. November. Website: http://longbeach.gov/lbds/planning/caap/ (accessed November 2021).

The Draft CAAP also includes the CAAP Consistency Review Checklist (CAAP Checklist), which would be used for future projects to determine their consistency with the CAAP.

4.1.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to air quality if it would:

Threshold 4.1.1: Conflict with or obstruct implementation of the applicable air quality plan;

Threshold 4.1.2: 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 4.1.3: Expose sensitive receptors to substantial pollutant concentrations; or

Threshold 4.1.4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

As discussed in Section 4.3.1 of the Initial Study prepared for the proposed project (Appendix A), the proposed project would not result in other emissions, such as those leading to odors, that would adversely affect a substantial number of people, and this impact was determined to be less than significant. Therefore, this topic is not further addressed below.

4.1.5.1 Regional Emissions Thresholds

SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the SCAB. The emissions thresholds were established based on the attainment status of the SCAB with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Table 4.1.E lists the CEQA significance thresholds for construction and operational emissions established for the SCAB.

Table 4.1.C: Regional Thresholds for Construction and Operational Emissions (in Pounds per Day)

Emissions Source	Pollutant Emissions Threshold (lbs/day)					
	VOC	NO_x	CO	PM_{10}	$PM_{2.5}$	SO_x
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: SCAQMD. Air Quality Significance Thresholds. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed November 2021).

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

Projects in the SCAB with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and that apply throughout the SCAB, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

4.1.5.2 Localized Significance Thresholds

The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008, recommending that all air quality analyses include an assessment of air quality impacts to nearby sensitive receptors.[16] This guidance was used to analyze potential localized air quality impacts associated with construction of the proposed project. Localized significance thresholds (LSTs) are developed based on the size or total area of the emission source, the ambient air quality in the source receptor area, and the distance to the project. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality.

LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For the proposed project, the appropriate SRA for the LST is the nearby South Coastal Los Angeles County area (SRA 4). SCAQMD provides LST screening tables for 25, 50, 100, 200, and 500-meter source-receptor distances. The closest sensitive receptors include the single-family residences located adjacent to the western border of the project site. Therefore, this analysis uses the 25-meter source-receptor distance.

Based on the anticipated construction equipment, it is assumed that the maximum daily disturbed acreage for the proposed project would be 1.5 acres.[17] Once operational, the total project site is 0.4 acre; therefore, the 1-acre thresholds were used for operation of the proposed project. Table 4.1.F lists the emissions thresholds that apply during project construction and operation.

Table 4.1.D: SCAQMD LST Thresholds (in Pounds per Day)

Emissions Source	Pollutant Emissions Threshold (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Construction (1.5-acre, 25-meter distance)	70.0	714.0	5.5	4.0
Operations (1-acre, 25-meter distance)	57.0	585.0	1.0	1.0

Source: SCAQMD. *Final Localized Significance Threshold Methodology* (July 2008).
CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance threshold
NO_x = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District

16 SCAQMD. 2008. *Final Localized Significance Threshold Methodology*. July.

17 SCAQMD. n.d. *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*. Website: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf (accessed July 2022).

4.1.5.3 Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project site are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the SCAB, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

4.1.6 Project Impacts

Threshold 4.1.1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategies being based on projections from local General Plans.

Consistency with the 2016 AQMP would be achieved if the project is consistent with the goals, objectives, and assumptions in this plan to achieve the federal and State air quality standards. Per the SCAQMD *CEQA Air Quality Handbook*, there are two main indicators of a project's consistency with the AQMP:

- **Indicator 1:** Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the AAQS or emission reductions in the AQMP.

- **Indicator 2:** Whether the project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

Indicator 1: As demonstrated under Threshold 4.1.2 below, the proposed project would result in short-term construction and long-term operational pollutant emissions that are all less than the CEQA significance emissions thresholds established by the SCAQMD. As such, the proposed project would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the AAQS or emission reductions in the AQMP. Therefore, the proposed project is considered consistent with Indicator 1.

Indicator 2: The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and

offshore drilling facilities. The proposed project would include a General Plan Amendment. As such, this analysis evaluates whether the project would exceed the 2016 AQMP's assumptions for 2040 or yearly increments based on the year of project buildout and phasing.

With respect to determining the proposed project consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2020–2045 RTP/SCS, the City's population, households, and employment are forecast to increase by approximately 18,700 residents, 29,600 households, and 29,500 jobs, respectively, between 2016 and 2045.[18]

The proposed project includes an approximately 12,780 square-foot (sf) fire station and associated improvements. The proposed project is intended to meet the City's need to replace the original Fire Station No. 9, which was previously located at 3917 Long Beach Boulevard and is slated for demolition. The project site is currently developed with an approximately 5,000 sf office building, which would be demolished as a part of the proposed project. Since the proposed project is replacing the original Fire Station No. 9, the proposed project would not substantially increase population, households, or employment in the City. In addition, since the proposed project would not include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities, the proposed project is not defined as a significant project as defined by the SCAQMD *CEQA Air Quality Handbook.* Therefore, it is unlikely that the proposed project would interfere with SCAQMD's goals for improving air quality in the region. The proposed project would not conflict with the 2016 AQMP and, as such, would not jeopardize attainment of the CAAQS and NAAQS in the area under the jurisdiction of the SCAQMD. The proposed project is therefore considered consistent with Indicator 2.

Summary: The proposed project would not conflict with or obstruct the implementation of the air quality plans prepared by SCAQMD to attain State and national air quality standards or violate any air quality standard. As such, the proposed project would result in a less than significant impact related to a conflict or obstruction of implementation of applicable air quality plans. No mitigation is required.

Threshold 4.1.2: 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?

Less Than Significant Impact. The SCAB is currently designated nonattainment for the federal and State standards for O_3 and $PM_{2.5}$. In addition, the SCAB is in nonattainment for the PM_{10} standard. The SCAB's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual

[18] Southern California Association of Governments (SCAG). 2020. *Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy.* Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176 (accessed January 2022).

emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is not necessary. The following analysis assesses the potential project-level air quality impacts associated with construction and operation of the proposed project.

Construction. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by demolition, grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, VOCs, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Project construction activities would include demolition, grading, site preparation, building construction, architectural coating, and paving activities. Construction-related effects on air quality from the proposed project would be greatest during the grading phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403 (Fugitive Dust), which would require the contractor to implement measures that would reduce the amount of particulate matter generated during the construction period.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, VOCs, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod. As discussed in the Project Description, construction of the proposed project is anticipated to commence in Winter 2022 and take approximately 16 months, which was also included in CalEEMod. The proposed project would require the demolition of the existing structure on site, which was included in CalEEMod. The

proposed project would require the import of approximately 45 cubic yards of fill material, which was also included in CalEEMod. Demolition, grading, and building activities would involve the use of standard earthmoving equipment such as large excavators, cranes, and other related equipment. In addition, construction worker trips in CalEEMod were revised based on the construction trip generation, which was calculated based on the estimated number of construction trucks and workers, as identified in Section 4.7, Transportation.

As specified in Compliance Measures AQ-1 through AQ-4 found below in Section 4.1.8, construction of the proposed project would comply with SCAQMD standard conditions, including Rule 403 (Fugitive Dust) to control fugitive dust and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Compliance with SCAQMD standard conditions is a regulatory requirement and was considered in the analysis of construction emissions.

The maximum daily emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$ that would result from construction of the proposed project are summarized in Table 4.1.G based on CalEEMod and compared to the SCAQMD regional significance thresholds. CalEEMod output sheets are included in Appendix C. As shown in Table 4.1.G, construction emissions associated with the proposed project would not exceed the significance thresholds established by the SCAQMD for any of the criteria pollutants.

Table 4.1.E: Project Construction Emissions (in Pounds per Day)

Project Construction	Maximum Pollutant Emissions (lbs/day)					
	VOCs	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Mobilization	0.4	8.7	6.3	<0.1	0.6	0.3
Demolition	0.6	10.6	8.9	<0.1	0.8	0.5
Grading and Undergrounding	0.5	12.5	9.0	<0.1	3.0	1.5
Substructure, Superstructure, and Interior Fit-out and Landscaping	0.6	11.0	9.5	<0.1	0.9	0.5
Paving and Off-site Work	0.6	8.5	8.4	<0.1	0.8	0.4
Architectural Coating, Site Works, and Landscaping	4.2	2.4	1.9	<0.1	0.1	0.1
Peak Daily Emissions	**4.2**	**12.5**	**9.5**	**<0.1**	**3.0**	**1.0**
SCAQMD Thresholds	75.0	100.0	550.0	150	150.0	55.0
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (July 2022).

[1] Peak daily emissions of VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$ occur during overlap of the Building Construction, Paving, and Architectural Coating phases.

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

As shown in Table 4.1.G, construction emissions associated with the project would not exceed the SCAQMD thresholds for VOC, NO_x, CO, SO_X, $PM_{2.5,}$ or PM_{10} emissions. As discussed above, according to SCAQMD guidance, projects that exceed the significance thresholds are considered by SCAQMD to result in cumulatively considerable air quality impacts. Conversely, projects that do not exceed the significance thresholds are generally not considered to result in cumulatively considerable air

quality impacts. Therefore, based on the fact that emissions during construction of the proposed project would not exceed any of the air quality significance thresholds for any criteria pollutants, the proposed project would not have a cumulatively considerable air quality impact. Therefore, with compliance with regulatory requirements (as specified in Compliance Measures AQ-1 through AQ-4), construction impacts related to the cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under applicable NAAQS or CAAQS would be less than significant, and no mitigation is required.

Operation. Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle and fire engine trips), energy sources (e.g., electricity and natural gas), area sources (e.g., architectural coatings and the use of landscape maintenance equipment), and stationary sources (e.g., diesel emergency backup generator) related to the proposed project.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. As discussed above, the proposed project includes an approximately 12,780 sf fire station, which would replace the original Fire Station No. 9, which was previously located at 3917 Long Beach Boulevard and is slated for demolition. As such, although the proposed project would generate 42 net new average daily trips in the immediate vicinity of the project site, total Citywide vehicle trips would not be increased, as these trips already occur in association with the temporary location of Fire Station No. 9. Therefore, this regional air quality analysis assumes that no new vehicle or fire engine trips would occur with implementation of the proposed project and, as such, the proposed project would not generate new mobile source emissions.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. The primary sources of energy demand for the proposed project would include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators, computers, and kitchen appliances. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. The proposed project would be designed to comply with the water efficiency and energy conservation requirements included in the California Building Standards Code (California Code of Regulations [CCR], Title 24). In addition, the project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification and would include solar panels on the roof, low-flow plumbing fixtures, LED lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce heating and cooling costs, which were accounted for in the analysis.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the project would include emissions from the use of architectural

coatings, consumer products, and landscaping equipment. The proposed project would also generate stationary source emissions associated with use of the diesel emergency backup generator.

Long-term operation emissions associated with the proposed project were calculated using CalEEMod. Model results are shown in Table 4.1.H below. CalEEMod output sheets are included in Appendix C.

Table 4.1.F: Project Operational Emissions (in Pounds per Day)

Source	Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project Area Sources	0.3	<0.1	<0.1	0.0	<0.1	<0.1
Project Energy Sources	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Project Mobile Sources	0.0	0.0	0.0	0.0	0.0	0.0
Project Stationary Sources	0.1	0.2	0.2	<0.1	<0.1	<0.1
Total Project Emissions	**0.4**	**0.2**	**0.2**	**<0.1**	**<0.1**	**<0.1**
SCAQMD Thresholds	55.0	55.0	550.0	150.0	150.0	55.0
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (July 2022).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compound

As shown in Table 4.1.H, project emissions would be minimal and would not exceed the significance criteria for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ emissions; therefore, the proposed project would not have a significant effect on regional air quality. Therefore, operational impacts related to the cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under applicable NAAQS or CAAQS would be less than significant, and no mitigation is required.

Localized Significance Threshold. Project construction and operation emissions were compared to the LST screening tables in SRA 4, based on a 25-meter source-receptor distance and a 1.5-acre project size during construction and a 1.0-acre project size during operation. The results of the LST analysis are summarized in Table 4.1.I and Table 4.1.J.

Table 4.1.G: Project Localized Construction Emissions (in Pounds per Day)

Source	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Project Emissions	12.3	8.1	2.7	1.5
Localized Significance Threshold	70.0	714.0	5.5	4.0
Exceeds?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (July 2022).
CO = carbon monoxide
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Table 4.1.H: Project Localized Operational Emissions (in Pounds per Day)

Source	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Project Emissions	0.1	0.2	<0.1	<0.1
Localized Significance Threshold	57.0	585.0	1.0	1.0
Exceeds?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (July 2022).
CO = carbon monoxide
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Construction activities would result in localized exhaust emissions that have the potential to affect nearby sensitive receptors. In order to identify impacts to sensitive receptors, the SCAQMD recommends analyzing LSTs for construction. Table 4.1.I shows that the localized construction emissions would not exceed the LSTs that apply to the project site.

As shown in Table 4.1.I, construction emissions associated with the proposed project would not exceed the LSTs established by SCAQMD. Further, as specified in Compliance Measure AQ-1, construction of the proposed project would comply with SCAQMD standard conditions, including Rule 403 (Fugitive Dust) to control fugitive dust. Compliance with the SCAQMD standard conditions identified in Compliance Measures AQ-1 through AQ-4 is a regulatory requirement and was considered in the analysis of construction emissions. Because the project emissions would not exceed the LSTs with their compliance with regulatory requirements (and would be further reduced with implementation of Compliance Measures AQ-1 through AQ-4), impacts related to the exposure of sensitive receptors to substantial pollutant concentrations during project construction would be less than significant. No mitigation is required.

In addition, a project would generate localized exhaust emissions that have the potential to affect nearby sensitive receivers if the project includes stationary sources or attracts mobile sources that may spend long periods queueing and idling at the site (e.g., warehouse or transfer facilities). As such, operational LSTs are not applicable to the proposed project. Although the proposed project does not include such uses, impacts associated with the operational localized emissions have been analyzed for disclosure purposes. Operational LSTs apply to NO_X, CO, PM_{10}, and $PM_{2.5}$.

Screening-level analysis of LST is recommended for operational activities at the project site only. Off-site vehicle trips are not included in the LST analysis. The CalEEMod model includes all operational emissions for both on- and off-site sources. For a worst-case scenario assessment, the LST emissions shown in Table 4.1.J include all on-site project-related stationary and area sources that would occur on site. A total of 5 percent is considered conservative because more than 95 percent of the project-related vehicle trips would occur off site. Table 4.1.J shows the maximum daily emissions for the project's operational activities compared with the SCAQMD LSTs for NO_X, CO, PM_{10}, and $PM_{2.5}$.

As shown in Table 4.1.J, project operational source emissions would not exceed LSTs established by the SCAQMD. Therefore, because the project would not exceed the LSTs established by the SCAQMD, localized emissions from operation of the proposed project would not expose any sensitive receptors to substantial pollutant concentrations, impacts would be less than significant, and no mitigation is required.

Long-Term Microscale (CO Hot Spot) Analysis. Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Long Beach station, the closest station to the project site, showed a highest recorded 1-hour concentration of 4.7 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 2.1 ppm (the State standard is 9 ppm) during the past 3 years (Table 4.1.D). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

The proposed project would replace the original Fire Station No. 9. The proposed project would generate 42 net new average daily trips in the immediate vicinity of the project site, including 7 AM peak hour trips and 2 PM peak hour trips. As the proposed project would not generate 100 or more AM or PM peak hour trips, the proposed project did not meet the criteria for an evaluation of study area intersection or roadway segment LOS. Therefore, it is assumed that the addition of the proposed project traffic would not create any significant adverse impacts to nearby intersections.

Therefore, given the extremely low level of CO concentrations in the project area, and lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly to result in the CO concentrations exceeding the State or federal CO standards. Impacts related to CO hot spots would be less than significant, and no mitigation is required.

Threshold 4.1.3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units. Land uses located adjacent to the project site include residential and commercial uses. The closest sensitive receptors to the project site include the single-family residences located adjacent to the western border of the project site.

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement

measures to reduce or eliminate emissions by following SCAQMD rules for standard construction practices. As shown in Table 4.1.I and Table 4.1.J, the project would not result in significant localized or regional emissions during project construction or operation. Therefore, once the project is constructed, the project would not be a source of substantial pollutant emissions and sensitive receptors would not be exposed to substantial pollutant concentrations during either project construction or operation. As such, impacts would be considered less than significant, and no mitigation is required.

4.1.7 Level of Significance Prior to Mitigation

The proposed project would result in less than significant impacts. However, the following compliance measures are existing SCAQMD regulations that are applicable to the proposed project and are considered in the analysis of potential impacts related to air quality. These requirements are considered to be mandatory compliance measures; therefore, they are not mitigation measures.

4.1.8 Compliance Measures and Mitigation Measures

The following compliance measures pertaining to air quality are applicable to the proposed project.

Compliance Measure AQ-1 **SCAQMD Rule 403.** During clearing, grading, earth moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventative measures by using the following procedures, in compliance with South Coast Air Quality Management District (SCAQMD) Rule 403 during construction. The applicable Rule 403 measures are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least twice daily (locations where grading is to occur shall be thoroughly watered prior to earthmoving).
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet (0.6 meter) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Pave construction access roads at least 100 feet (30 meters) onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.

Compliance Measure AQ-2 All trucks that are to haul excavated or graded material shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.

Compliance Measure AQ-3 Prior to approval of the project plans and specifications, the City shall confirm that the construction bid packages specify:

- Contractors shall use high-volume low-pressure paint applicators with a minimum transfer efficiency of at least 50 percent;
- Coatings and solvents that will be utilized have a volatile organic compound content lower than required under SCAQMD Rule 1113; and
- To the extent feasible, construction/building materials shall be composed of pre-painted materials.

Compliance Measure AQ-4 The project shall comply with SCAQMD Rule 402. Rule 402 prohibits the discharge of air contaminants or other material from any type of operations, which can cause nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort or repose of any such persons, or the public.

4.1.9 Level of Significance after Mitigation

No mitigation measures related to air quality are required for the proposed project.

4.1.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for air quality. The cumulative impact area for air quality related to the proposed project is the SCAB.

Air pollution is inherently a cumulative type of impact measured across an air basin. The discussion under Threshold 4.1.2, above, includes an analysis of the proposed project's contribution to cumulative air impacts. To summarize the conclusion with respect to that analysis, the incremental effect of projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively considerable. The proposed project's construction- and operation-related regional daily emissions are less than the SCAQMD significance thresholds for all criteria pollutants. In addition, adherence to SCAQMD rules and regulations would substantially reduce potential impacts associated with South Coast Air Basin -wide air pollutant emissions. Therefore, the proposed project would not have a cumulatively considerable increase in emissions, and the proposed project's cumulative air quality impacts would be less than significant. No mitigation is required.

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4.2 CULTURAL RESOURCES

This section of the Draft Environmental Impact Report (EIR) evaluates the potential for the Fire Station No. 9 Project (proposed project) to impact cultural resources. Cultural resources are sites, buildings, structures, objects, and districts over 50 years old that may have traditional or cultural value for the historical significance they possess. The information and analysis presented in this section are based on the City of Long Beach (City) General Plan Historic Preservation Element (June 2010), the *Archaeological Resources Study for the City of Long Beach Fire Station No. 9 Project in Los Angeles County, California* (Archaeological Resources Memorandum; LSA, December 2021a) and the *Historic Resources Evaluation of 4101 Long Beach Boulevard for the City of Long Beach Fire Station No. 9 Project* (Historic Resources Memorandum; LSA, November 2021b). The complete Archaeological Resources Memorandum is contained in Appendix D of this Draft EIR. The compete Historic Resources Memorandum is contained in Appendix E of this Draft EIR.

The term "site" is used in two contexts in this section:

- The "project site" should be interpreted to mean the approximately 0.4-acre site proposed for development.
- A "cultural resources site" should be interpreted to mean the specific locations of documented cultural materials or artifacts.

4.2.1 Scoping Process

The City of Long Beach received five comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix B of this Draft EIR. One comment letter included comments related to Cultural Resources.

The letter from Native American Heritage Commission (NAHC) received on February 22, 2022, suggested contacting the California Historical Research Information System Center for an archaeological records search. They indicated that if an archaeological inventory survey is required a professional report detailing findings and recommendations shall be included. Additionally, the NAHC advised that the lack of surface evidence of archaeological resources does not preclude their subsurface existence. As discussed, an Archaeological Resources Memorandum was prepared for the proposed project (Appendix D).

4.2.2 Existing Environmental Setting

The project site is located at 4101 Long Beach Boulevard and is currently developed with an approximately 5,000 sf single-story office building and related parking and landscaping. The buildings currently occupied by Catalina Adventure Tours and would be demolished as part of the proposed project. As mentioned above, aerial photographs were used to determine that the project site was developed prior to 1953.

4.2.3 Regulatory Setting

This section includes applicable federal, State, regional, and City regulations.

4.2.3.1 Federal Regulations

There are no federal regulations that are applicable to cultural resources relevant to the proposed project.

4.2.3.2 State Regulations

California Environmental Quality Act (CEQA) Requirements. CEQA defines a "historical resource" as a resource that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources (California Register); (2) listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's lead agency (PRC Section 21084.1 and *State CEQA Guidelines* Section 15064.5(a)). A historical resource consists of:

> "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…. Generally, a resource shall be considered by the Lead Agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" *State CEQA Guidelines* Section 15064.5(a)(3).

In accordance with *State CEQA Guidelines* Section 15064.5(b), a substantial adverse change in the significance of a historical resource is a significant effect on the environment.

CEQA requires a lead agency to determine whether an archaeological cultural resource meets the definition of a historical resource, a unique archaeological resource, or neither (*State CEQA Guidelines* Section 15064.5(c)). Prior to considering potential impacts, the lead agency must determine whether an archaeological cultural resource meets the definition of a historical resource in *State CEQA Guidelines* Section 15064.5(c)(1). If the archaeological cultural resource meets the definition of a historical resource, it is treated like any other type of historical resource in accordance with *State CEQA Guidelines* Section 15126.4. If the archaeological cultural resource does not meet the definition of a historical resource, then the lead agency determines whether it meets the definition of a unique archaeological resource as defined in *State CEQA Guidelines* Section 21083.2(g). In practice, however, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource. Should the archaeological cultural resource meet the definition of a unique archaeological resource, it must be treated in accordance with *State CEQA Guidelines* Section 21083.2. If the archaeological cultural resource does not meet the definition of a historical resource or an archaeological resource, the effects to the resource are not considered significant effects on the environment (*State CEQA Guidelines* Section 15064.5(c)(4)).

California Public Resources Code Section 5097.5. PRC Section 5097.5 provides for the protection of cultural resources and prohibits the removal, destruction, injury, or defacement of archaeological features on any lands under the jurisdiction of State or local authorities.

California Health and Safety Code Section 7050.5. California Health and Safety Code (HSC) Section 7050.5 states that 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 or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

California Register of Historical Resources (PRC Section 5020 et seq.) State law also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources in CEQA documents. A cultural resource is an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the *State CEQA Guidelines*. These criteria are nearly identical to those of the National Register of Historic Places (National Register).

The State Historic Preservation Officer (SHPO) maintains the California Register. Properties listed, or formally designated eligible for listing, on the National Register are nominated to the California Register and then selected to be listed on the California Register, as are State Landmarks and Points of Interest.

4.2.3.3 Regional Regulations

There are no regional or Los Angeles County regulations applicable to cultural resources relevant to the proposed project.

4.2.3.4 Local Regulations

City of Long Beach General Plan Historic Preservation Element. The City's Historic Preservation Element (2010) of the General Plan addresses protection of the City's heritage and cultural resources. The following relevant goals related to cultural resources is presented in the Historic Preservation Element. Implementation measures are included in the Historic Preservation Element but are not listed below.

> **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 1.3**: The City shall allocate sufficient resources to implement the historic preservation program.

Policy 1.4: The City shall use public input to help shape the historic preservation program.

Policy 1.5: The City shall use and encourage the public to use technical assistance available through the State Office of Historic Preservation, National Park Service, the California Preservation Foundation, and the National Trust for Historic Preservation to help guide and fund Long Beach's Historic Preservation Program.

Policy 1.6: The City shall pursue grant funding available through the CLG program, the State Office of Historic Preservation, and other funding sources to maintain and expand the historic preservation program in Long Beach.

Policy 1.7: The City shall continue to provide training for Cultural Heritage Commissioners and City staff implementing the historic preservation program on topics including the Secretary of the Interior Standards, the State Historic Building Code, environmental review for historic resources, tax credits and incentives for historic preservation, and other preservation issues.

Policy 1.8: The City shall evaluate the effectiveness of the Historic Preservation Program and make policy and program changes as necessary.

Goal 2: Protect historic resources from demolition and inappropriate alterations through the use of the City's regulatory framework, technical assistance, and incentives.

Policy 2.1: The City shall discourage the demolition and inappropriate alteration of historic buildings.

Policy 2.2: The City shall encourage and allow for adaptive reuse of historic buildings.

Policy 2.3: The City shall continue to use the Secretary of the Interior's Standards as guidelines for appropriate rehabilitation projects, adaptive reuse, or additions to historic structures.

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 3: Maintain and expand the inventory of historic resources in Long Beach.

Policy 3.1: The City shall conduct and update historic resource surveys on an ongoing basis and, in compliance with CLG requirements, shall ensure that survey results are integrated into the statewide comprehensive historic preservation planning process.

Policy 3.2: The City shall utilize the citywide historic context statement (The City of Long Beach Historic Context Statement, 2009) as the framework for historic preservation in Long Beach, and as a tool for evaluating individual resources and districts in Long Beach.

Policy 3.3: The City shall conduct historic resources surveys pursuant to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the California Office of Historic Preservation's Instruction for Recording Historical Resources, in compliance with CLG requirements.

Policy 3.4: As a part of any action taken by the City, the City shall make available to the public the results of historic resources surveys, information on designated landmarks and districts in Long Beach, and properties identified as potentially significant, including those identified through CEQA or Section 106 analysis.

Policy 3.5: The City shall work to better integrate information about historic resources and potential historic resources with other property databases maintained by the City's Geographic Information Systems unit.

City of Long Beach General Plan Urban Design Element. The City's Urban Design Element (2019) of the General Plan addresses protection of the City's heritage and cultural resources. The following relevant goals related to cultural resources is presented in the Urban Design Element:

Policy UD 2-1: Encourage a mix of building forms that embrace key historic resources of a neighborhood, encouraging architectural preservation and allowing for innovative renovations to older structures that will contribute to neighborhood character.

Policy UD 9-1: Identify and preserve historic buildings that enhance a historic district or are classified as a contributing structure.

Strategy No. 9: Protect and enhance historic resources, distinguishing architecture, and other features that contribute to the unique character and identity of each neighborhood.

Policy UD 9-3: Identify, preserve, and enhance scenic areas and iconic sites. See Map UD-1, Historic Sites of the Urban Design Element of the City's General Plan.

Long Beach Municipal Code. Chapter 2.63, Cultural Heritage Commission of the City of Long Beach's Municipal Code, was enacted to provide recognition, preservation, protection and use of cultural

resources that are necessary to the health, property, social and cultural enrichment and general welfare of the people.

4.2.4 Methodology

An archaeological resources study was conducted for the proposed project for the project site and was documented in the Archaeological Resources Memorandum (LSA 2021b). The Archaeological Resources Memorandum describes the records search and additional background research conducted for the project. The records search was conducted by an LSA Archaeologist on December 14, 2021, at the South Central Coastal Information Center (SCCIC), located at California State University, Fullerton. The SCCIC is the official repository of cultural resources records and reports for Los Angeles County. The records search included a review of all recorded historic-period and prehistoric cultural resources within a 0.25-mile radius of the project site, as well as a review of known cultural resources surveys and excavation reports. The records search also included a review of the following State and federal inventories:

- Built Environment Resources Directory (BERD) (OHP n.d.)
- California Historical Landmarks (OHP 1996)
- California Points of Historical Interest (OHP 1992)
- California Inventory of Historic Resources (OHP 1976)

Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources for the National Register, the California Register, California Points of Historical Interest, California Inventory of Historic Resources, California Landmarks, and National Historic Landmarks.

The additional background research also included a review of aerial photographs, historic-period maps, and geologic maps to assess the potential for subsurface archaeological deposits at the project site.

4.2.4.1 Results

The records search results indicate that no previous cultural resource studies have included the project site and one previously study (a literature search) included a portion of the area within a 0.25-mile radius of the project site. No cultural resources have been previously recorded in the project site or within 0.25 mile of the project site. No resources listed in the BERD are within the project site.

The earliest available aerial photograph that includes the project site dates to 1953, at which time the project site was already disturbed and developed with a building. Additionally, the current channelized alignment of the Los Angeles River was already constructed in 1953 and the general vicinity of the project was already developed with buildings.

Some subsurface sediments of the project site consist of older alluvium, lake, playa, and terrace deposits that date to the Pleistocene (California Geological Survey 2015). The ages of Pleistocene deposits range from 2.58 million years ago to 11,700 years ago.

4.2.5 Thresholds of Significance

The thresholds for cultural resources impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines*. The proposed project may be deemed to have a significant impact with respect to cultural resources if it would:

Threshold 4.2.1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

Threshold 4.2.2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

Threshold 4.2.3: Disturb any human remains, including those interred outside of dedicated cemeteries.

The Initial Study, included as Appendix A, substantiates that there would be no impacts associated with Threshold 4.2.1. The Historic Resources Evaluation (LSA 2021) (Appendix E) was prepared to evaluate the potential for the proposed project to cause substantial adverse changes to any historical resources that may exist in or around the project site. The project site is currently developed with a commercial building that was constructed in 1951. Because the building is 50 years of age or older, in compliance with the California Environmental Quality Act (CEQA), it was evaluated for historical significance as part of the environmental review process for the project. According to the Historic Resources Evaluation, the office building on the project site was not determined to be a historical resource. In addition, the Initial Study concluded that impacts associated with Threshold 4.2.3, disturbance of human remains, would be less than significant. Therefore, these thresholds will not be further addressed in the Draft EIR.

4.2.6 Project Impacts

Threshold 4.2.2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant with Mitigation Incorporated. As discussed above, no previously recorded archaeological deposits or human remains were identified on or within the project site. Additionally, no cultural resources have been previously recorded in the project site or within 0.25 mile of the project (LSA, 2021b). However, no previous cultural resource studies have included the project site and one previously study has included a portion of the area within a 0.25-mile radius of the project site. A field survey was not conducted because the project site is fully developed, and any artifacts identified in planters would not be in their original context. The earliest available aerial photograph dates to 1953, at which time the project site was already disturbed and developed with a building. The project site is in close proximity to the natural alignment of the Los Angeles River and a natural marshland, which both would have been utilized by Native American and historic-period populations as a water and food source. As discussed above, the project site was developed prior to 1953. Therefore, there is potential for subsurface historic-period deposits associated with the original development of the project site.

As identified in the Archaeological Resources Memorandum, the project site is considered moderately sensitive for subsurface archaeological resources. Therefore, Mitigation Measure CUL-1 is proposed, requiring a qualified to archaeologist be present to monitor construction-related ground disturbance associated with the project. Monitoring would continue until the archaeologist determines that there is a low potential for encountering subsurface archaeological, cultural, or tribal cultural resources. Therefore, with incorporation of Mitigation Measure CUL-1 potential significant impacts to archaeological resources would be reduced to a less than significant level.

4.2.7 Level of Significance Prior to Mitigation

Prior to mitigation, impacts to archaeological resources are considered potentially significant and Mitigation Measure CUL-1 is required.

4.2.8 Compliance Measures and Mitigation Measures

4.2.8.1 Mitigation Measures

The following mitigation measures are required to reduce potential impacts to archaeological resources:

Mitigation Measure CUL-1 **Archaeological Site Monitoring.** An archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards for archaeology shall oversee archaeological monitoring of construction-related ground disturbance. Monitoring shall continue until the archaeologist determines that there is a low potential for encountering subsurface archaeological, cultural, or tribal cultural resources. In the event that archaeological cultural resources are identified by the archaeological monitor during ground-disturbing project activities, the nature of the find shall be assessed, and the project archaeologist shall determine if additional cultural resources work is appropriate. Additional cultural resources work may include, but is not limited to, collection and documentation of artifacts, documentation of the cultural resources on State of California Department of Parks and Recreation (DPR) Series 523 forms, or subsurface testing. Upon completion of any cultural resources work for the project, the archaeologist shall prepare a report to document the methods and results of the work. This report shall be submitted to any descendant community involved in the investigation(s) and the South Central Coastal Information Center (SCCIC).

4.2.9 Level of Significance after Mitigation

With incorporation of Mitigation Measure CUL-1, potential impacts to subsurface archaeological, cultural, or tribal cultural resources would be reduced to a less than significant level. All anticipated impacts to cultural resources would be considered less than significant.

4.2.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects. The cumulative impact area for cultural resources for the proposed project is the City of Long Beach.

As discussed above, the proposed project would not have an impact on historical resources. Potential impacts of the proposed project to unknown archaeological resources, when combined with the impacts of past, present, and reasonably foreseeable projects in the City of Long Beach, could contribute to a cumulatively significant impact due to the overall loss of archaeological resources unique to the region. However, each discretionary development proposal received by the City is required to undergo environmental review pursuant to CEQA. If there were any potential for significant impacts to archaeological resources associated with specific projects in the cumulative impact area, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. When archaeological resources are assessed and/or protected as they are discovered, impacts to these resources are considered less than significant.

The proposed project would have a less than significant impact related to unknown cultural resources with implementation of Mitigation Measure CUL-1. As such, the proposed project, in conjunction with other development in the City, would not result in a significant cumulative impact to unique archaeological resources and previously undiscovered buried human remains.

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4.3 ENERGY

This section discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency. The energy use analysis in this section is based on information from the California Emissions Estimator Model (CalEEMod) version 2020.4.0 modeling results contained in Appendix C of this Draft Environmental Impact Report (EIR).

4.3.1 Scoping Process

The City of Long Beach (City) received 5 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix B of this Draft EIR. No comment letters included comments related to energy.

4.3.2 Methodology

The analysis focuses on the four sources of energy that are relevant to the proposed project: electricity, natural gas, the equipment fuel necessary for project construction, and vehicle fuel necessary for project operations. The proposed project is intended to meet the City's need to replace the original Fire Station No. 9, which was previously located at 3917 Long Beach Boulevard and is slated for demolition due to contamination by toxic mold. As such, although the proposed project would generate 42 net new average daily trips in the immediate vicinity of the project site, total Citywide vehicle trips would not be increased as these trips are already occurring at the temporary Fire Station No. 9 location. Therefore, the proposed project would not result in an increase in gasoline or diesel fuel consumption during project operation. Energy use consumed during operation of the proposed project would be associated with electricity and natural gas consumption, which is based on information from CalEEMod.

4.3.3 Existing Environmental Setting

4.3.3.1 Electricity

Electricity is a manmade 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. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).

According to the most recent data available, in 2020, California's electricity was generated primarily by natural gas (37.06 percent), renewable sources (33.09 percent), large hydroelectric (12.21 percent), nuclear (9.33 percent), coal (2.74 percent), and other and unspecified sources. Total

electric generation in California in 2020 was 272,576 gigawatt-hours (GWh), down 2 percent from the 2019 total generation of 277,704 GWh.[1]

The project site is within the service territory of Southern California Edison (SCE). SCE provides electricity to more than 15 million people in a 50,000-square-mile (sq mi) area of Central, Coastal, and Southern California.[2] According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2020 was 83,633 GWh (32,475 GWh for the residential sector and 51,158 GWh for the non-residential sector). Total electricity consumption in Los Angeles County in 2020 was 65,650 GWh (22,913 GWh for the residential sector and 42,737 GWh for the non-residential sector).[3]

4.3.3.2 Natural Gas

Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).

Natural gas consumed in California is used for electricity generation (45 percent), residential uses (21 percent), industrial uses (25 percent), and commercial uses (9 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.[4]

The City of Long Beach Energy Resources Department (LBER) purchases natural gas from Southern California Gas Company (SoCalGas) and provides natural gas services to residents and businesses of Long Beach and Signal Hill and portions of surrounding communities, including the cities of Bellflower, Compton, Lakewood, Los Alamitos, Paramount, and Seal Beach. Currently, LBER is the fifth largest municipal gas utility in the nation, serving approximately 500,000 residents[5] and businesses via approximately 150,000 connected gas meters, delivered through over 1,800 miles of

1 California Energy Commission (CEC). 2021b. *2020 Total System Electric Generation*. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation (accessed November 2021).

2 Southern California Edison (SCE). 2021. About Us. Website: https://www.sce.com/about-us/who-we-are (accessed November 2021).

3 CEC. 2021c. Electricity Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx and http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed November 2021).

4 CEC. 2021d. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california (accessed November 2021).

5 Long Beach Energy Resources Department. Website: http://www.longbeach.gov/energyresources// (accessed July 2022).

LBER pipelines.[6] LBER's customer profile is 53 percent residential and 47 percent commercial/industrial.

LBER receives a small portion (approximately 5 percent) of its natural gas supply directly into its pipeline system from local production fields in the planning areas, as well as offshore facilities. The remainder of LBER's natural gas supplies is purchased from the southwestern United States. LBER also receives intrastate transmission service for purchased gas from SoCalGas.

According to the CEC, total natural gas consumption in the LBER service area in 2020 was 91 million therms (48 million therms for the residential sector and 43 million therms for the non-residential sector). Total natural gas consumption in Los Angeles County in 2020 was 2,937 million therms (1,238 million therms for the residential sector and 1,699 million therms for the non-residential sector).[7]

4.3.3.3 Petroleum/Transportation Energy

Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil, gasoline, and diesel.

The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.2 mpg in 2019.[8] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. The Act, which originally mandated a national fuel economy standard of 35 mpg by year 2020[9], applies to cars and light trucks of Model Years 2011 through 2020. In March 2020, the United States Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) finalized the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, further detailed below.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, total gasoline consumption in California was 360,237 thousand barrels or 1,819.9 trillion British Thermal Units (BTU) in 2019.[10] Of the total gasoline consumption, 343,677 thousand

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6 California Gas and Electric Utilities. 2020 California Gas Report. Website: https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf (accessed July 2022).

7 CEC. 2021e. Gas Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx and http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed July 2022).

8 U.S. Department of Transportation (DOT). "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Website: https://www.bts.dot.gov/bts/bts/content/average-fuel-efficiency-us-light-duty-vehicles (accessed November 2021).

9 U.S. Department of Energy. 2007. "Energy Independence & Security Act of 2007." Website: https://www.afdc.energy.gov/laws/eisa (accessed November 2021).

10 A British Thermal Unit is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

barrels or 1,736.3 trillion BTU were consumed for transportation.[11] Based on fuel consumption obtained from EMFAC2021, approximately 589.7 million gallons of diesel and approximately 4.0 billion gallons of gasoline will be consumed from vehicle trips in Los Angeles County in 2021.

4.3.4 Regulatory Setting

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (USEPA) are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. On the State level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

The CEC is the State's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources, and plans for/directs state response to energy emergencies. The applicable federal, State, regional, and local regulatory framework is discussed below.

4.3.4.1 Federal Regulations

Energy Policy Act of 2005. The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under this Act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Safer Affordable Fuel-Efficient Vehicles Rule. On March 21, 2020, the USEPA and National Highway Traffic Safety Administration (NHTSA) finalized the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The SAFE Vehicles Rule amends certain existing Corporate Average Fuel Economy and tailpipe CO_2 emissions standards for passenger cars and light trucks and establishes new standards, all covering model

[11] U.S. Department of Energy, Energy Information Administration (EIA). 2021. California State Profile and Energy Estimates. Table F3: Motor gasoline consumption, price, and expenditure estimates, 2019. Website: eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (accessed November 2021).

years 2021 through 2026. More specifically, the NHTSA set new Corporate Average Fuel Economy standards for model years 2022 through 2026 and amended its 2021 model year Corporate Average Fuel Economy standards, and the USEPA amended its CO_2 emissions standards for model years 2021 and later.

4.3.4.2 State Regulations

Assembly Bill 1575, Warren-Alquist Act. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require EIRs to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting. In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an *Integrated Energy Policy Report* every 2 years and an update every other year. The most recently adopted report includes the *2021 Integrated Energy Policy Report*[12] and the *2022 Integrated Energy Policy Report Update.*[13] The *Integrated Energy Policy Report* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural

[12] CEC. 2021a. *2021 Integrated Energy Policy Report*. California Energy Commission. Docket Number: 21-IEPR-01.

[13] CEC. 2022. *2022 Integrated Energy Policy Report Update*. California Energy Commission. Docket Number: 22-IEPR-01.

gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.

Renewable Portfolio Standard. SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all the State's electricity come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[14]

Title 24, California Building Code. Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, and the current 2019 CBC went into effect on January 1, 2020. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

California Green Building Standards Code (CALGreen Code). In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2019 CALGreen Code standards that became effective January 1, 2020. The CALGreen Code established mandatory measures for residential and non-residential building construction and encouraged sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce greenhouse gas (GHG) emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

California Energy Efficiency Strategic Plan. On September 18, 2008, the CPUC adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California.[15] The Plan articulates a long-term vision and goals for each economic sector and identifies

[14] California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (accessed November 2021).

[15] CPUC. 2008. California Long-Term Energy Efficiency Strategic Plan. September. Website: cpuc.ca.gov/General.aspx?id=4125 (accessed November 2021).

specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The Plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofit to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

4.3.4.3 Regional Regulations

Assembly Bill 811, Contractual Assessments: Energy Efficiency Improvements. In July 2008, in partnership with Los Angeles County, the City participated in a program to use AB 811 funds for a program providing energy audits, energy efficiency upgrades, and installation of photovoltaic solar power systems permanently attached to real property to reduce out-of-pocket expenses to the property owner.

4.3.4.4 Local Regulations

Sustainable City Action Plan. The City adopted the Sustainable City Action Plan on February 2, 2010, with the purpose of moving the City towards becoming a more sustainable City. Sustainability is defined in this plan as maximizing individual benefits and minimizing negative environmental impacts to ensure the long-term health of the environment for the enjoyment and use of current and future generations. The Sustainable City Action Plan includes initiatives, goals, and actions that are meant to guide City decision-makers in striving towards achieving a sustainable City. The following goals, initiatives, and actions are applicable to the proposed project:[16]

Sustainability Goal 2: Reduce electricity use in City operations by 25% by 2020.

Sustainability Goal 3: Reduce natural gas use in City operations by 15% by 2020.

Sustainability Goal 4: Facilitate the development of at least 2 megawatts of solar energy on City facilities by 2020.

Sustainability Goal 5: Reduce community electricity use by 15% by 2020.

Sustainability Goal 6: Reduce community natural gas use by 10% by 2020.

Sustainability Goal 7: Facilitate the development of at least 8 megawatts of solar energy within the community (private rooftops) by 2020.

Energy Initiative 2: Ensure all of the City of Long Beach's operational needs are met through energy efficiency, conservation, and renewable energy sources.

Energy Initiative 3: Reduce electricity and natural gas consumption of the Long Beach community.

[16] City of Long Beach. Office of Sustainability. 2010. Sustainable City Action Plan. Adopted February 2, 2010.

Action 1: Increase energy efficiency in City facilities through ongoing energy audits, retrofits, weatherization, and preventative maintenance.

Action 4: Encourage the use of energy-efficient products including efficient lighting, energy monitoring systems, cool and green roofs, insulation, and efficient HVAC systems.

Action 9: Implement energy efficiency and conservation measures.

The City's Sustainable City Commission works with staff every year to develop an Annual Work Plan that identifies projects and programs that will be prioritized for the upcoming year. In January 2021, a presentation was made to provide a 10-Year Report for the preliminary results of the Action Plan.[17]

Draft Climate Action and Adaption Plan. The City of Long is currently preparing a Climate Action and Adaptation Plan (CAAP)[18]. The Draft CAAP is a comprehensive planning document outlining the City's proposed approach both to address climate impacts on Long Beach and to reduce Long Beach's impact on the climate by reducing GHG emissions. The Draft CAAP provides a framework to reduce the City's GHG footprint (climate action) and ensure the community and physical assets are better protected from the impacts of climate change (climate adaptation). The vision of the Draft CAAP is to create a more sustainable, resilient, and equitable city by addressing climate change in a way that remedies existing environmental health disparities while also improving health, quality of life, and enhancing economic vitality throughout Long Beach. The Draft CAAP includes a roadmap for implementing new polices, programs, incentives, requirements, projects, and initiatives in the immediate future, as well as longer-term actions that will need to be studied further while monitoring how the climate continues to change and evaluating the effectiveness of actions taken. The Draft CAAP also includes the CAAP Consistency Review Checklist (CAAP Checklist) which would be used for future projects to determine their consistency with the CAAP.

4.3.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to energy if it would:

Threshold 4.3.1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation, or

Threshold 4.3.2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

[17] City of Long Beach. 2021. Sustainable City Action Plan 10-Year Report. Website: http://longbeach.legistar.com/View.ashx?M=F&ID=9091134&GUID=6F0A933E-6DF8-478C-B87B-227B7C7B8303 (accessed November 2021)

[18] City of Long Beach. 2020. Draft Climate Action and Adaptation Plan. November. Website: http://longbeach.gov/lbds/planning/caap/ (accessed November 2021).

As discussed in Section 4.6.1 of the Initial Study prepared for the proposed project (Appendix A), the impacts related to energy consumption will be evaluated as part of this Draft EIR.

4.3.6 Project Impacts

Threshold 4.3.1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. The proposed project would increase the demand for energy through day-to-day operations and fuel consumption associated with project construction. This section discusses energy use resulting from implementation of the proposed project and evaluates whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Construction. Construction of the proposed project is anticipated to last approximately 16 months and would require energy for activities such as the manufacture and transportation of building materials, demolition and grading activities, and building construction. Construction of the proposed project would require electricity to power construction-related equipment. Construction of the proposed project would not involve the consumption of natural gas. The construction-related equipment would not be powered by natural gas, and no natural gas demand is anticipated during construction.

Transportation energy represents the largest energy use during construction and would occur from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and vendor trucks hauling materials to and from the project site would be anticipated to use diesel fuel, whereas construction workers traveling to and from the project site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and the travel mode.

Construction emissions were estimated for the project using CalEEMod version 2020.4.0. As discussed in the Project Description, construction of the proposed project is anticipated to commence in Winter 2022 and take approximately 16 months, which was included in CalEEMod. The proposed project would require the demolition of the existing structures on the project site and would require the import of approximately 45 cubic yards of fill material, which was included in CalEEMod. Demolition, grading, and building activities would involve the use of standard earthmoving equipment such as large excavators, cranes, and other related equipment, which was included in CalEEMod. In addition, construction worker trips in CalEEMod were revised based on the construction trip generation, as identified in Section 4.7, Transportation.

Estimates of fuel consumption (diesel fuel and gasoline) from construction equipment, construction trucks, and construction worker vehicles were based on default construction equipment assumptions and trip estimates from CalEEMod and fuel efficiencies from EMFAC2021. Fuel

consumption estimates are presented in Table 4.3.A. Detailed calculations are included in Appendix C.

Table 4.3.A: Proposed Project Energy Consumption Estimates During Construction

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Diesel Fuel (total gallons)	17,250	<0.1
Gasoline (total gallons)	6,708	<0.1

Source: Compiled by LSA Associates, Inc. (July 2022).

As indicated in Table 4.3.A, the project would consume approximately 17,250 gallons of diesel fuel and approximately 6,708 gallons of gasoline during construction. Based on fuel consumption obtained from EMFAC2021, approximately 589.7 million gallons of diesel and approximately 4.0 billion gallons of gasoline will be consumed from vehicle trips in Los Angeles County in 2021. Therefore, construction of the proposed project would account for less than 0.1 percent of the annual diesel and gasoline fuel usage in Los Angeles County. As such, project construction would have a negligible effect on local and regional energy supplies. Furthermore, impacts related to energy use during construction would be temporary and relatively small in comparison to Los Angeles County's overall use of the State's available energy resources. No unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State.

For these reasons, fuel consumption during construction would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature, and impacts would be less than significant. No mitigation is required.

Operation. Operational energy use is typically associated with natural gas use, electricity consumption, and fuel used for vehicle trips associated with a project. The proposed project includes an approximately 12,780 square-foot (sf) two-story fire station and associated improvements. The proposed project is intended to meet the City's need to replace the original Fire Station No. 9, which was previously located at 3917 Long Beach Boulevard and is slated for demolition due to contamination by toxic mold. As such, although the proposed project would generate 42 net new average daily trips in the immediate vicinity of the project site, total Citywide vehicle trips would not be increased as these trips are already occurring at the temporary Fire Station No. 9 location. Therefore, the proposed project would not result in an increase in gasoline or diesel fuel consumption during project operation. Energy use consumed during operation of the proposed project would be associated with electricity and natural gas consumption. The proposed project would also require a diesel emergency backup generator; however, diesel consumption associated with the emergency backup generator is expected to be minimal and would nominally increase annual diesel fuel use in Los Angeles County.

Electricity and natural gas consumption was estimated for the proposed project using default energy intensities by land use type in CalEEMod. In addition, the proposed project would be constructed to current CALGreen standards, which was included in CalEEMod inputs. The project would be

designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification and would include solar panels on the roof, low-flow plumbing fixtures, LED lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce heating and cooling costs, which were accounted for in the analysis. Electricity usage estimates associated with the proposed project are shown in Table 4.3.B.

Table 4.3.B: Proposed Project Energy Consumption Estimates During Operation

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption (kWh/year)	136,711	<0.1
Natural Gas Consumption (therms/year)	1,191	<0.1

Source: Compiled by LSA Associates, Inc. (July 2022).
kWh = kilowatt-hours

As shown in Table 4.3.B, the estimated electricity demand associated with the operation of the proposed project is 136,711 kWh per year. Total electricity demand in Los Angeles County in 2020 was approximately 65,650 GWh (65,649,878,013 kWh). Therefore, operation of the proposed project would increase the annual electricity consumption in Los Angeles County by less than 0.01 percent. Further, electricity consumption is currently occurring at the temporary Fire Station No. 9 location, which would be replaced by the proposed project.

As shown in Table 4.3.B, the estimated potential increase in natural gas demand associated with the proposed project is 1,191 therms per year. Total natural gas consumption in Los Angeles County in 2020 was approximately 2,937 million therms (2,936,687,098 therms). Therefore, operation of the proposed project would negligibly increase the annual natural gas consumption in Los Angeles County by less than 0.01 percent. Further, natural gas consumption is currently occurring at the temporary Fire Station No. 9 location, which would be replaced by the proposed project.

Electrical and natural gas demand associated with project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed project would replace an older fire station with a more energy efficient building. The project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The project would be required to adhere to all federal, State, and local requirements for energy efficiency, which would substantially reduce energy usage. Impacts are considered less than significant, and no mitigation is required.

Threshold 4.3.2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. In 2002, the Legislature passed SB 1389, which required the CEC to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet

operators in implementing incentive programs for ZEVs and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC's *2021 Integrated Energy Policy Report* and *2022 Integrated Energy Policy Report Update* provide the results of the CEC's assessments of a variety of energy issues facing California. The City of Long Beach relies on the State integrated energy plan and does not have its own local plan to address renewable energy or energy efficiency.

As indicated above, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the overall use in the County. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the overall use in Los Angeles County, and the State's available energy resources. Further, the proposed project would replace the energy usage occurring at the temporary Station No. 9. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be minor, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, as demonstrated above under Threshold 4.3.1, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy. Potential impacts related to conflict with or obstruction of a State or local plan for renewable energy or energy efficiency would be less than significant, and no mitigation is required.

4.3.7 Level of Significance Prior to Mitigation

The proposed project would result in less than significant impacts related to energy, and no mitigation is required.

4.3.8 Compliance Measures and Mitigation Measures

No compliance measures or mitigation measures are required for the proposed project.

4.3.9 Level of Significance after Mitigation

There would be no significant unavoidable adverse impacts related to energy, and no mitigation is required.

4.3.10 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects.

The geographic area for cumulative analysis of electricity is that of the SCE service area, while the geographic area for cumulative analysis of natural gas service is that of the LBER service area. The proposed project would result in an increased services demand in electricity and natural gas, although this demand is already occurring at the temporary Fire Station No. 9 location, which would be replaced by the proposed project. The proposed project would not require SCE to expand or construct infrastructure that could cause substantial environmental impacts. As discussed

previously, total electricity consumption in the SCE service area in 2020 was 83,633 GWh. By 2030, consumption is anticipated to increase by approximately 12,000 GWh for the low-demand scenario and by 22,000 GWh for the high-demand scenario.[19] While this forecast represents a large increase in electricity consumption, the proposed project's share of cumulative consumption would be negligible. The proposed project, in combination with cumulative development, is well within SCE's system-wide net annual increase in electricity supplies over the 2018 to 2030 period, and there are sufficient planned electricity supplies in the region for estimated net increases in energy demands.

Similarly, additional natural gas infrastructure is not anticipated due to cumulative development. Total natural gas consumption in the LBER service area in 2020 was approximately 91 million therms. In 2020, the California Gas and Electric Utilities[20] published the 2020 California Gas Report. In addition to providing a summary of the existing and historic natural gas demands, the 2020 California Gas Report provides projected annual gas supplies for future years through year 2035. According to the 2020 California Gas Report, the natural gas demand in the LBER Department's service area is estimated to be 23.8 million cubic feet per day (244,732 therms per day or 89,327,180 therms per year) in 2020 through 2035 (the furthest horizon year for which data are available).[21] The proposed project's share of cumulative consumption of natural gas in the LBER service area would be negligible. It is anticipated that LBER would be able to meet the natural gas demand of the related projects without additional facilities. In addition, both SCE and LBER demand forecasts include the growth contemplated by the proposed project and the related projects. Increased energy efficiency to comply with building energy efficiency standards will reduce energy consumption on a per-square-foot basis. Furthermore, utility companies are required to increase their renewable energy sources to meet the Renewable Portfolio Standards mandate of 60 percent renewable supplies by 2030. SCE and LBER plan to continue to provide reliable service to their customers and upgrade their distribution systems as necessary to meet future demand.

In addition, as discussed above, during construction activities, transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Los Angeles County and the region. Once operational, the proposed project would not increase transportation energy use. Therefore, the proposed project does not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, the proposed project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable, and no mitigation is required.

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19 CEC. 2018. *California Energy Demand, 2018–2030 Revised Forecast*. Publication Number: CEC-200-2018-002-CMF. February. Website: https://efiling.energy.ca.gov/getdocument.aspx?tn=223244 (accessed November 2021).

20 Consists of the following: Southern California Gas Company, Pacific Gas & Electric Company, San Diego Gas & Electric Company, Southwest Gas Corporation, City of Long Beach Energy Resources Department, Sacramento Municipal Utilities District, and Southern California Edison Company.

21 California Gas and Electric Utilities. 2020, op cit.

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4.4 GREENHOUSE GAS EMISSIONS

This section summarizes existing greenhouse gas (GHG) emissions and discusses global climate change, its causes, and the contribution of human activities. This section also estimates the likely GHG emissions that would result from construction and operational activities associated with development of the proposed project, including vehicular and fire engine traffic, energy consumption and other emission sources.

4.4.1 Scoping Process

The City of Long Beach (City) received 5 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix B of this Draft Environmental Impact Report (EIR). No comment letters included comments related to GHG emissions.

4.4.2 Methodology

The proposed project would result in GHG emissions from construction and operational sources. Construction activities would generate emissions at the site from off-road construction equipment, and on roadways as a result of construction-related truck hauling, vendor deliveries, and worker commuting. Operational GHG emissions are typically associated with mobile sources (e.g., vehicle trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). This analysis uses the California Emissions Estimator Model version 2020.4.0 (CalEEMod) to quantify GHG emissions for both construction and operation of the proposed project. CalEEMod output is contained in Appendix C.

4.4.3 Existing Environmental Setting

The following describes existing GHG emissions in the City of Long Beach, beginning with typical GHG types and sources, impacts of global climate change, the regulatory framework surrounding these issues, and current emission levels.

4.4.3.1 Background

The following section provides background information on GHGs and global climate change.

Global Climate Change. Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius (°C) or 1.1 ± 0.4° Fahrenheit (°F) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are

released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[1]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are the following:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this analysis, the term "GHGs" will refer collectively only to the six gases listed above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table 4.4.A shows the GWP for each type of GHG. For example, sulfur hexafluoride is 22,800 times more potent at contributing to global warming than carbon dioxide.

[1] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse allows heat from sunlight in and reduces the heat escaping, GHGs like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of GHGs results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

Table 4.4.A: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoromethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: *Climate Change 2007: The Physical Science Basis* (Intergovernmental Panel on Climate Change [IPCC] 2007b).

The following summarizes the characteristics of the six GHGs and black carbon. Black carbon also contributes to climate change and is therefore discussed below.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of man-made emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO_2, and consequently, the gas is building up in the atmosphere.

In 2019, total annual CO_2 accounted for approximately 83 percent of California's overall GHG emissions.[2] Transportation is the single largest source of CO_2 in California, which is primarily comprised of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane. Methane (CH_4) is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation in dairy cows, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for approximately 9 percent of GHG emissions in California in 2019.

Nitrous Oxide. Nitrous oxide (N_2O) is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the

[2] California Air Resources Board (CARB). 2021. GHGs Descriptions & Sources in California. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed November 2021).

majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. Nitrous oxide emissions accounted for approximately 3 percent of GHG emissions in California in 2019.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[3] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry has resulted in greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5 percent of GHG emissions in California in 2019.[4]

Black Carbon. Black carbon is the most strongly light-absorbing component of particulate matter (PM) formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of particulate matter less than 2.5 microns in size ($PM_{2.5}$) and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the atmosphere, black carbon can absorb one million times more energy than CO_2.[5] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel fueled vehicles.[6] The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. Black carbon emissions in the U.S. are projected to decline substantially by 2030, largely due to controls on new mobile diesel emissions.[7]

Effects of Global Climate Change. Effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme weather events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress

[3] The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

[4] CARB. 2021. op cit.

[5] United States Environmental Protection Agency (USEPA). 2017. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed November 2021).

[6] Ibid.

[7] USEPA. 2017. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot. epa.gov/www3/airquality/blackcarbon/basic.html (accessed November 2021).

and heat-related problems. Heat-related problems include heat rash and heat stroke. In addition, climate-sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects. Such diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture. Global climate change may also result in impacts to local air quality from increased ground-level ozone and particulate matter.[8]

Additionally, according to the 2006 California Climate Action Team (CAT) Report,[9] the following climate change effects, which are based on trends established by the United Nations Intergovernmental Panel on Climate Change (IPCC), can be expected in California over the course of the next century:

- The loss of sea ice and mountain snow pack, resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;[10]

- Rise in global average sea level, primarily due to thermal expansion and melting of glaciers and ice caps in the Greenland and Antarctic ice sheets;[11]

- Changes in weather that include widespread changes in precipitation, ocean salinity, wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;[12]

- Decline of the Sierra snowpack, which accounts for approximately one-half of the surface water storage in California by 70 percent to as much as 90 percent over the next 100 years;[13]

- Increase in the number of days conducive to ozone (O_3) formation by 25 to 85 percent (depending on the future temperature scenario) in high O_3 areas of Los Angeles and the San Joaquin Valley by the end of the 21st century;[14] and

- High potential for erosion of California's coastlines and seawater intrusion into the Delta and levee systems due to the rise in sea level.[15]

A summary of these potential effects is provided in Table 4.4.B, below.

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8 USEPA. 2020. Air Quality and Climate Change Research. Website: https://www.epa.gov/air-research/air-quality-and-climate-change-research (accessed November 2021).

9 California Environmental Protection Agency (CalEPA). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

10 Ibid.

11 Ibid.

12 Intergovernmental Panel on Climate Change (IPCC). 2007b. *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*. February.

13 CalEPA. 2006, op. cit.

14 Ibid.

15 Ibid.

Table 4.4.B: Potential Impacts of Global Warming and Expected Consequences for California

Potential Water Resource Impacts	Anticipated Consequences Statewide
Reduction of the State's average annual snowpack	• The decline of the Sierra snowpack would lead to a loss in half of the surface water storage in California by 70% to 90% over the next 100 years • Potential loss of 5 million acre-feet or more of average annual water storage in the State's snowpack • Increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply • Higher surface evaporation rates with a corresponding increase in tropospheric water vapor
Rise in average sea level	• Potential economic impacts related to coastal tourism, commercial fisheries, coastal agriculture, and ports • Increased risk of flooding, coastal erosion along the State's coastline, seawater intrusion into the Sacramento-San Joaquin River Delta (Delta) and levee systems
Changes in weather	• Changes in precipitation, ocean salinity, and wind patterns • Increased likelihood for extreme weather events, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones
Changes in the timing, intensity, location, amount, and variability of precipitation	• Potential increased storm intensity and increased potential for flooding • Possible increased potential for droughts • Long-term changes in vegetation and increased incidence of wildfires • Changes in the intensity and timing of runoff • Possible increased incidence of flooding and increased sedimentation • Sea level rise and inundation of coastal marshes and estuaries • Increased salinity intrusion into the Delta • Increased potential for Delta levee failure • Increased potential for salinity intrusion into coastal aquifers (groundwater) • Increased potential for flooding near the mouths of rivers due to backwater effects
Increased water temperatures	• Increased environmental water demand for temperature control • Possible increased problems with foreign invasive species in aquatic ecosystems • Potential adverse changes in water quality, including the reduction of dissolved oxygen levels • Possible critical effects on listed and endangered aquatic species
Changes in urban and agricultural water demand	• Changes in demand patterns and evapotranspiration
Increase in the number of days conducive to O_3 formation	• Increased temperatures • Potential health effects, including adverse impacts to respiratory systems

Source: *Environmental Water Account Draft Supplemental EIS/EIR to the Environmental Water Account Final EIS/EIR, Bureau of Reclamation Mid-Pacific Region*, Sacramento, California (U.S. Department of the Interior, October 2007).
EIR = Environmental Impact Report
EIS = Environmental Impact Statement
O_3 = ozone

Effects of Rising Ocean Levels in California. Rising ocean levels, more intense coastal storms, and warmer water temperatures may increasingly threaten the Long Beach coastal region. As previously described, global surface temperatures have increased by 1.5 degrees Fahrenheit (°F) during the period from 1880 to 2012, with temperatures anticipated to rise in California by 3 to 10.5°F by the end of the century.

Rising sea levels may affect the natural environment in the coming decades by eroding beaches, converting wetlands to open water, exacerbating coastal flooding, and increasing the salinity of estuaries and freshwater aquifers. Coastal headlands and beaches are expected to erode at a faster pace in response to future sea level rise. The California Coastal Commission estimates that 450,000 acres of wetlands exist along the California coast,[16] but additional work is needed to evaluate the extent to which these wetlands would be degraded over time, or to what extent new wetland habitat would be created if those lands are protected from further development. Cumulatively, the effects of sea level rise may be combined with other potential long-term factors such as changes in sediment input and nutrient runoff. The cumulative impacts of physical and biological change due to sea level rise on the quality and quantity of coastal habitats are not well understood. [17]

Sea level along the west coast of the United States is affected by a number of factors, including climate patterns such as El Niño, effects from the melting of modern and ancient ice sheets, and geologic processes such as plate tectonics. Regional projections for California, Oregon, and Washington show a sharp distinction at Cape Mendocino in northern California. South of that point, sea-level rise is expected to be very close to global projections. Projections are lower north of Cape Mendocino because the land is being pushed upward as the ocean plate moves under the continental plate along the Cascadia Subduction Zone.

The Final Climate Change Vulnerability Assessment Results[18] (2018) prepared for the Long Beach Climate Action and Adaptation Plan (CAAP) identifies the California Ocean Protection Council's (OPC) guidance on sea level rise in its State of California Sea-Level Rise Guidance 2018 Update (OPC, March 2018), which relied on previous findings from its *Rising Seas in California, an Update on Sea-Level Rise Science* [April 2017]). The OPC developed future sea level rise projections at each tide station along the California coast. The OPC guidance incorporated a range of global emissions scenarios ranging from aggressive emissions reductions to no emissions reductions through the end of the century. Sea level rise will cause many harmful economic, ecological, physical, and social impacts but incorporating sea level rise impacts into agency decisions can help mitigate some of these potential impacts. The updated State of California's Sea-Level Guidance Document recommends the ranges of sea level rise presented in the March 2018 OPC guidance report as a starting place for analysis of

16 California Coastal Commission (CCC). Procedural Guidance for the Review of Wetland Projects in California's Coastal Zone. Website: http://www.coastal.ca.gov/wetrev/wetch4.html (accessed November 2021).

17 Climate Change Science Program (CCSP) 4.1. January 15, 2009, 1 of 784 Final Report, United States CCSP, Synthesis and Assessment Product 4.1. Coastal Sensitivity to Sea-Level Rise: A Focus on the Mid-Atlantic Region. Lead Agency: U.S. Environmental Protection Agency, Other Key Participating Agencies: U.S. Geological Survey, National Oceanic and Atmospheric Administration. Contributing Agencies: Department of Transportation.

18 AECOM. 2018. *Final Climate Change Vulnerability Assessment Results*.

potential impacts related to sea level rise. Table 4.4.C presents sea level rise projections for Los Angeles based on the OPC guidance.

Table 4.4.C: Sea Level Rise Projections for Los Angeles, California

Year (Emissions Scenario)	Inches Above 1991–2009 Mean Sea Level			
	Median (50% probability of exceedance)	Likely Range (67% likely range)	1-in-20 Chance (5% probability of exceedance)	1-in-200 Chance (0.5% probability of exceedance)
2030	4	2 to 6	7	8
2050	8	6 to 12	14	22
2100 (low emissions)	16	8 to 25	36	65
2100 (very high emissions)	26	16 to 38	49	80

Source: *State of California Sea-Level Rise Guidance 2018 Update* (OPC, March 2018).
OPC = California Ocean Protection Council

Rising sea levels may also affect the built environment, including coastal development such as buildings, roads, and infrastructure. Coastal areas within the City are relatively flat, low-lying, and developed and may be directly affected by the change in sea level resulting from global climate change.

Areas that are essentially at sea level are potentially exposed to the rising of the ocean levels and could result in on-site flood conditions. A recent wave uprush study completed for a project along the coast in Long Beach indicated that sea levels along the Long Beach coast could be expected to rise 0.5 to 2.6 feet (ft) by 2060 and 1.4 to 5.5 ft by 2100. [19] This is consistent with the sea level rise projections included in Table 4.4.C above. In addition, the *Final Climate Change Vulnerability Assessment Results*[20]report identifies the sea level rise vulnerability for geographical areas, buildings and facilities, parks and open space, transportation assets, energy assets, stormwater assets, wastewater assets, and potable water assets based on 11, 24, 36, and 66 inches of sea level rise.

Emissions Inventories. An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

> ***Global Emissions.*** Worldwide emissions of GHGs in 2018 totaled 25.6 billion metric tons (MT) of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[21]

19 AECOM. 2018. *Final Climate Change Vulnerability Assessment Results*.

20 Ibid.

21 United Nations Framework Convention on Climate Change (UNFCCC). 2021. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed November 2021).

United States Emissions. In 2019, the year for which the most recent data are available, the United States emitted about 6,558 million metric tons of CO_2e (MMT CO_2e). Overall, emissions in 2019 decreased by 1.7 percent since 2018 and were 13 percent lower than 2005 levels. This decrease was driven largely by a decrease in emissions from fossil fuel combustion resulting from a decrease in total energy use in 2019 compared to 2018 and a continued shift from coal to natural gas and renewables in the electric power sector. Of the six major sectors – residential, commercial, agricultural, industry, transportation, and electricity generation – transportation accounted for the highest amount of GHG emissions in 2019 (approximately 29 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.[22]

State of California Emissions. The State emitted approximately 418.2 MMT CO_2e emissions in 2019, 7.2 MMT CO_2e lower than 2018 levels and almost 13 MMT CO_2e below the 2020 GHG Limit of 431 MMT CO_2e.[23] The California Air Resources Board (CARB) estimates that transportation was the source of approximately 40 percent of the State's GHG emissions in 2019, followed by industrial sources at approximately 21 percent and electricity generation at 14 percent. The remaining sources of GHG emissions were agriculture at 8 percent, residential activities at 7 percent, commercial activities at 4 percent, high GWP at 5 percent, and waste at 2 percent.[24]

City of Long Beach Emissions. As part of preparing the City's Draft CAAP, the City developed baseline GHG emissions inventories for the year 2015 for production and consumption "jurisdictional emissions"—those emissions sources over which the City and community have some amount of influence. These jurisdictional emissions sources are primarily aligned with the BASIC inventory methodology described in the Draft CAAP, except for the removal of port-based waterborne activities like cargo shipping and aircraft activities at the Long Beach Airport.

As shown in Table 4.4.D below, the City's 2015 total jurisdictional production emissions were 6.0 MT CO_2e per capita or 4.5 MT CO_2e per service population with the majority coming from stationary sources (49 percent) and transportation contributing the remainder (44 percent). The remaining approximately 6 percent comes from solid waste and wastewater.

In addition, a consumption emissions inventory of the City of Long Beach was conducted for the Draft CAAP based on the average carbon generated in the production and use of goods and services by households in Long Beach. Consumption emissions are categorized as energy, transportation, or goods and services. As shown in Table 4.4.E below, the City's 2015 total jurisdictional production emissions were 15.1 MT CO_2e per capita with the majority coming from goods and services (50 percent) and transportation contributing (32 percent). The remaining approximately 18 percent comes from energy consumption.

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22 USEPA. 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. Website: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019 (accessed November 2021).

23 CARB. 2021. *California Greenhouse Gas Emissions for 2000 to 2019, Trends of Emissions and Other Indicators Report*. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf (accessed November 2021).

24 Ibid.

Table 4.4.D: City of Long Beach 2015 Jurisdictional Production Emissions Inventory by Subsector

Sector/Subsector	MT CO_2e/yr	Percent of Total
Stationary Energy	**1,377,291**	**49.20%**
Residential Energy	428,245	15.30%
Commercial and Institutional Buildings Energy	300,818	10.75%
Manufacturing Industries and Construction Energy	399,089	14.26%
Energy Industries	219,899	7.86%
Fugitive Emissions from Natural Gas	29,240	1.04%
Transportation	**1,244,981**	**44.48%**
On-Road Transportation	1,213,601	43.36%
Railways	11,883	<1.00%
Aviation	4,550	<1.00%
Off-Road Equipment	14,947	<1.00%
Waste	**176,850**	**6.32%**
Solid Waste	173,164	6.19%
Solid Waste Incineration	95	<1.00%
Wastewater	3,592	<1.00%
TOTAL	**2,799,123**	**100.00%**

Source: City of Long Beach (November 2020).
Note: Percentages may not appear to total correctly due to rounding
MT CO_2e/yr = metric tons of carbon dioxide equivalent per year

Table 4.4.E: City of Long Beach 2015 Consumption Emissions Inventory by Subsector

Sector/Subsector	MT CO_2e/yr	Percent of Total
Energy	**1,284,173**	**18.00%**
Electricity	534,063	8.0%
Natural Gas	348,138	5.00%
Water	117,371	2.00%
Construction	284,600	4.00%
Transportation	**2,230,704**	**32.00%**
Vehicle Fuel	1,764,092	25.00%
Car Manufacturing	216,760	3.00%
Public Transit	13,237	<1.00%
Air Travel	236,615	3.00%
Goods and Services	**3,562,469**	**50.00%**
Food	1,272,429	18.00%
Goods	1,229,408	17.00%
Services	1,060,633	15.00%
TOTAL	**7,077,3446**	**100.00%**

Source: City of Long Beach (November 2020).
Note: Percentages may not appear to total correctly due to rounding
MT CO_2e/yr = metric tons of carbon dioxide equivalent per year

4.4.4 Regulatory Setting

4.4.4.1 Federal Regulations

Federal Clean Air Act. The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the United States Environmental Protection Agency (USEPA) has the authority to regulate CO_2 emissions under the Federal Clean Air Act (FCCA). While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Federal Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

4.4.4.2 State Regulations

Assembly Bill 1493 (2002). In a response to the transportation sector's significant contribution to California CO_2 emissions, Assembly Bill (AB) 1493 was enacted on July 22, 2002. AB 1493 requires the California Air Resources Board (CARB) to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of Clean Air Act Preemption was not granted by the USEPA until June 30, 2009. CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025.

Executive Order S-3-05 (2005). Executive Order (EO) S-3-05 was signed by the Governor on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies in order to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State legislature disclosing the progress made toward greenhouse emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads the Climate Action Team (CAT) comprised of representatives from State agencies as well as numerous other boards and departments. CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the

State Climate Adaptation Strategy. CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and State legislature was released in March 2006 and it presented 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the executive order. The most recent CAT Report to the Governor and State legislature was released in December 2010.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aimed at reducing GHG emissions to 1990 levels by 2020 and was met early in 2016. CARB has established the level of GHG emissions in 1990 at 427 MMT CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 required the CARB to prepare a Scoping Plan that outlined the main State strategies to meet the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 169 MMT of CO_2e, or approximately 30 percent, from the State's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002 to 2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory

On August 24, 2011, the CARB unanimously approved both the new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry out AB 32. The CARB also approved a more robust CEQA-equivalent document supporting the supplemental analysis of the cap-and-trade program. The cap-and-trade program took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The First Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan, and it also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. The CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32.[25] The 2030 target is to reduce GHG emissions to 40 percent below 1990 levels by 2030.

Senate Bill 97 (2007). SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the State Office of Planning

[25] CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.

and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in January 2010, which went into effect in March 2010. The amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008). Signed into law on October 1, 2008, SB 375 supplements GHG reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, the CARB approved GHG reduction targets in February 2011 for California's 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations (MPOs). The CARB may update the targets every four years and must update them every eight years. MPOs in turn must demonstrate how their plans, policies and transportation investments meet the targets set by the CARB through Sustainable Community Strategies (SCS). The SCS are included with the Regional Transportation Plan (RTP), a report required by State law. However, if an MPO finds that their SCS will not meet the GHG reduction target, they may prepare an Alternative Planning Strategy (APS). The APS identifies the impediments to achieving the targets. Pursuant to SB 375, the Southern California Association of Governments (SCAG) reduction targets for per capita vehicular emissions are 8 percent by 2020 and 13 percent by 2035 as shown in Table 4.4.F.

Table 4.4.F: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (%)	By 2035 (%)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6–13	13–16
Los Angeles/Southern California	8	19

Source: California Air Resources Board (2018).

Executive Order B-30-15 (2015). The Governor signed EO B-30-15 on April 29, 2015, which added the immediate target:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. The CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving

forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act. SB 350, signed by the Governor on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for private utilities and by the California Energy Commission for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires state energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197. In summer 2016 the Legislature passed, and the Governor signed, SB 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in the April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps the State on the path toward achieving the 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by the CARB was posted in December 2016.

Senate Bill 100 (SB 100). On September 10, 2018, the Governor signed SB 100, which raises California's Renewable Portfolio Standard (RPS) requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18. EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs the CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The

goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Title 24, Building Standards Code and CALGreen Code. In November 2008, the California Building Standards Commission established the California Green Building Standards (CALGreen) Code, which sets performance standards for residential and nonresidential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was most recently updated in 2016 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2017.

Cap and Trade. The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade program helped California meet its goal of reducing GHG emissions to 1990 levels by 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. The cap-and-trade emissions trading program developed by the CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the State by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap was set in 2013 at approximately 2 percent below the emissions forecast for 2020. In 2014, the cap declined approximately 2 percent. Beginning in 2015 and continuing through 2020, the cap has been declining approximately 3 percent annually. The CARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities. On January 1, 2015, compliance obligation began for distributors of transportation fuels, natural gas, and other fuels. California is working closely with British Columbia, Ontario, Quebec, and Manitoba through the Western Climate Initiative to develop harmonized cap-and-trade programs that will deliver cost-effective emission reductions. Two lawsuits have been filed against cap-and-trade, but the cap-and-trade program will be implemented as-is until further notice.[26]

Executive Order N-79-20. EO N-79-20, which was signed by the Governor on September 23, 2020, sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

[26] CARB. 2014. Cap-and-Trade Program. Website: www.arb.ca.gov/cc/capandtrade/capandtrade.htm (accessed November 2021).

4.4.4.3 Regional Regulations

The City is part of the South Coast Air Basin (Basin) and is under the jurisdiction of SCAG and the South Coast Air Quality Management District (SCAQMD). SCAG's 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted September 3, 2020, is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. A GHG consistency analysis was conducted to determine whether or not the proposed project would be consistent with the RTP/SCS.

Southern California Association of Governments. SCAG is a regional council consisting of the following six counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. In total, the SCAG region encompasses 191 cities and over 38,000 square miles within Southern California. SCAG is the MPO serving the region under federal law and serves as the Joint Powers Authority, the Regional Transportation Planning Agency, and the Council of Governments under State law. As the Regional Transportation Planning Agency, SCAG prepares long-range transportation plans for the Southern California region, including the RTP/SCS and the 2008 Regional Comprehensive Plan (RCP).

On September 3, 2020, SCAG adopted Connect SoCal–The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS).[27] In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled (VMT) from automobiles and light-duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, CARB has set GHG reduction targets at 8 percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. The RTP/SCS lays out a strategy for the region to meet these targets. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high-quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles.[28] However, the SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the SCS; instead, it provides incentives to governments and developers for consistency.

South Coast Air Quality Management District. In 2008, the SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the Basin. The Working Group developed several different options that are contained in the SCAQMD 2008 draft guidance document titled Interim CEQA GHG Significance Threshold for

[27] Southern California Association of Governments (SCAG). 2020. Connect SoCal: The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176 (accessed November 2021).

[28] SCAG. 2020. Connect SoCal: The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176 (accessed November 2021).

Stationary Sources, Rules and Plans[29] that could be applied by lead agencies. On September 28, 2010, SCAQMD Working Group Meeting #15 provided further guidance, including a tiered approach for evaluating GHG emissions for development projects where the SCAQMD is not the lead agency. The SCAQMD has not presented a finalized version of these thresholds to the governing board.

The SCAQMD identifies the emissions level for which a project would not be expected to substantially conflict with any State legislation adopted to reduce statewide GHG emissions. As such, the utilization of a service population represents the rates of emissions needed to achieve a fair share of the State's mandated emissions reductions. Overall, the SCAQMD identifies a GHG efficiency level that, when applied statewide or to a defined geographic area, would meet the post-2020 emissions targets as required by AB 32 and SB 32. If projects are able to achieve targeted rates of emissions per the service population, the State will be able to accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target and future post-2020 targets.

4.4.4.4 Local Regulations

City of Long Beach Sustainable City Action Plan. The City of Long Beach's Sustainable City Action Plan (SCAP) was adopted in February 2010. The SCAP is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. The SCAP includes initiatives, goals, and actions that will move Long Beach toward becoming a sustainable city. These goals and actions included in the SCAP relate to the following:

- Buildings & Neighborhoods
- Energy
- Green Economy & Lifestyle
- Transportation
- Urban Nature
- Waste Reduction
- Water

City of Long Beach Draft Climate Action and Adaptation Plan (CAAP). The City of Long is currently preparing a Climate Action and Adaptation Plan (CAAP).[30] The Draft CAAP is a comprehensive planning document outlining the City's proposed approach both to address climate impacts on Long Beach and to reduce Long Beach's impact on the climate by reducing GHG emissions. The Draft CAAP provides a framework to reduce the City's GHG footprint (climate action) and ensure the community and physical assets are better protected from the impacts of climate change (climate adaptation). The vision of the Draft CAAP is to create a more sustainable, resilient, and equitable city by addressing climate change in a way that remedies existing environmental health disparities while also improving health, quality of life, and enhancing economic vitality throughout Long Beach. The Draft CAAP includes a roadmap for implementing new polices, programs, incentives, requirements, projects, and initiatives in the immediate future, as well as longer-term actions that will need to be studied further while monitoring how the climate continues to change and evaluating the

[29] South Coast Air Quality Management District (SCAQMD). 2008. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans.

[30] City of Long Beach. 2020. Draft Climate Action and Adaptation Plan. November. Website: http://long beach.gov/lbds/planning/caap/ (accessed November 2021).

effectiveness of actions taken. The Draft CAAP also includes the CAAP Consistency Review Checklist (CAAP Checklist) which would be used for future projects to determine their consistency with the CAAP.

4.4.5 Thresholds of Significance

The following thresholds of significance criteria are based on Appendix G of the *State CEQA Guidelines* Based on these thresholds, implementation of the proposed project would have a significant adverse impact related to global climate change if it would:

Threshold 4.4.1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

Threshold 4.4.2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases.

As discussed in Section 4.8.1 of the Initial Study prepared for the proposed project (Appendix A), the impacts related to greenhouse gas emissions will be evaluated as part of this Draft EIR.

4.4.5.1 Regional Emissions Thresholds

The SCAQMD has adopted a significance threshold of 10,000 MT CO_2e per year (MT CO_2e/yr) for permitted (stationary) sources of GHG emissions for which SCAQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD has convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- **Tier 1. Exemptions:** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2. Consistency with a locally adopted GHG Reduction Plan:** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3. Numerical Screening Threshold:** If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. SCAQMD, under Option 1, is proposing a "bright-line" screening-level threshold of 3,000 MT CO_2e/yr for all land use types or, under Option 2, the following land-use-specific thresholds: 1,400 MT CO_2e for commercial projects, 3,500 MT CO_2e for residential projects, or 3,000 MT CO_2e for mixed-use projects. This bright-line threshold is based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA

projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal and therefore less than cumulatively considerable impact on GHG emissions.

- **Tier 4. Performance Standards:** If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT CO_2e per year per service population (MT CO_2e/yr/SP) for project-level analyses and 6.6 MT CO_2e/yr/SP for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

  Rate of Emission: GHG Emissions (MT CO_2e/yr) ÷ Service Population

  The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

However, the SCAQMD's thresholds are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan. Because the project would begin operations in the post-2020 timeframe, the 2020 numerical screening threshold of 3,000 MT CO_2e and the efficiency target of 4.8 MT CO_2e per year per service population would need to be adjusted to reflect the State's post-2020 GHG reduction goals.

SCAQMD has yet to publish a quantified GHG efficiency threshold for the 2030 target. A scaled threshold consistent with State goals detailed in SB 32, Executive Order B-30-15, and Executive Order S-3-05 to reduce GHG emissions by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, respectively, was developed for 2024, when the proposed project is anticipated to be operational. Though the SCAQMD has not published a quantified threshold beyond 2020, this assessment uses a threshold of 2,520 MT CO_2e per year or 4.0 MT CO_2e/yr/SP, which was calculated for the buildout year of 2024 based on the GHG reduction goals of SB 32 and Executive Order B-30-15.

For the purpose of this analysis, the proposed project will first be compared to the adjusted screening-level Tier 3 Numerical Screening Threshold of 2,520 MT CO_2e per year for all land use types. If it is determined that the proposed project is estimated to exceed this screening threshold, it will then be compared to the efficiency-based threshold.

The project is also evaluated for compliance with the City's CAAP and SCAG's 2020–2045 RTP/SCS, which establishes an overall GHG target for the project region consistent with the post-2020 GHG reduction goals of SB 32.

4.4.6 Project Impacts

Threshold 4.4.1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. This section describes the proposed project's construction- and operational-related GHG emissions and contribution to global climate change. SCAQMD has not addressed emission thresholds for construction in its CEQA Handbook; however, SCAQMD requires quantification and disclosure. Thus, this section discusses construction emissions.

Construction. Construction activities associated with the proposed project would produce combustion emissions from various sources. Construction would emit GHGs through the operation of construction equipment and from worker and builder supply vendor vehicles for the duration of the 16-month construction period. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, the fueling of heavy equipment emits CH_4. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, SCAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined as 30 years, added to the operational emissions, and compared to the applicable interim GHG significance threshold tier.

Construction emissions were estimated for the project using CalEEMod. As discussed in the Project Description (Chapter 3.0), construction of the proposed project is anticipated to commence in Winter 2022 and take approximately 16 months, which was assumed in CalEEMod. The proposed project would require the demolition of the existing structures on the project site and would require the import of approximately 45 cubic yards of fill material, which was included in CalEEMod. Demolition, grading, and building activities would involve the use of standard earthmoving equipment such as large excavators, cranes, and other related equipment, which was assumed in the analysis. In addition, construction worker trips in CalEEMod were revised based on the construction trip generation, as identified in Section 4.7, Transportation.

Using CalEEMod, it is estimated that the project would generate 217.1 MT CO_2e during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 7.2 MT CO_2e.

Operation. Long-term GHG emission impacts are typically associated with mobile, area, waste, water, and stationary sources as well as indirect emissions from sources associated with energy consumption.

Mobile source GHG emissions include project-generated vehicle and fire engine trips. As discussed in Section 4.1, Air Quality, the proposed project includes an approximately 12,780 sf fire station, which would replace the original Fire Station No. 9, which was previously located at 3917 Long Beach Boulevard and is slated for demolition due to contamination by toxic mold. As such, although the proposed project would generate 42 net new average daily trips in the immediate vicinity of the project site, total Citywide vehicle trips would not be increased. Therefore, this analysis assumes that no new vehicle or fire engine trips would occur with implementation of the proposed project and, as such, the proposed project would not generate new mobile source GHG emissions.

Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the project. The proposed project would be designed to comply with the water efficiency and energy conservation requirements included in the California Building Standards Code (California Code of Regulations [CCR], Title 24). In addition, the project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification and would include solar panels on the roof, low-flow plumbing fixtures, light-emitting diode (LED) lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce heating and cooling costs, which were accounted for in the analysis.

Area-source emissions would be associated with activities such as landscaping and maintenance on the project site, and other sources. Waste source emissions generated by the proposed project include energy generated by landfilling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment. The proposed project would also generate stationary source emissions associated with the diesel emergency backup generator.

Following guidance from the SCAQMD, GHG emissions were estimated using CalEEMod. Table 4.4.G shows the calculated GHG emissions for the proposed project. Energy source emissions are the largest source of GHG emissions for the project at 57 percent of the project total. Water use is the next largest category at approximately 19 percent and stationary sources are about 13 percent of the total emissions respectively. In addition, waste is approximately 11 percent of the total emissions. Area and mobile sources are less than one percent of the total emissions. Appendix C provides additional calculation details.

As discussed above, according to SCAQMD, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 2,520 MT CO_2e per year. Based on the analysis results, the proposed project would result in 60.9 MT CO_2e per year, which would be well below the numeric threshold of 2,520 MT CO_2e per year. Therefore, operation of the proposed project would not generate significant GHG emissions that would have a significant effect on the environment. Impacts would be considered less than significant, and no mitigation is required.

Table 4.4.G: GHG Emissions (Metric Tons Per Year)

Emission Type	Operational Emissions				
	CO_2	CH_4	N_2O	CO_2e	Percentage of Total
Area Source	<0.1	0.0	0.0	<0.1	0
Energy Source	30.5	<0.1	<0.1	30.7	57
Mobile Source	0.0	0.0	0.0	0.0	0
Stationary Source	6.7	<0.1	0.0	6.7	13
Waste Source	2.4	0.1	0.0	6.0	11
Water Source	8.2	0.1	<0.1	10.4	19
Total Operational Emissions				**53.7**	**100.0**
Amortized Construction Emissions				7.2	-
Total Annual Emissions				**60.9**	**-**
SCAQMD Threshold				**2,520**	-
Exceeds Threshold?				**No**	**-**

Source: LSA (July 2022).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
GHG = greenhouse gas
N_2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

Threshold 4.4.2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases?

Less Than Significant Impact. Applicable plans adopted for the purpose of reducing GHG emissions include the City's proposed CAAP, CARB's Scoping Plan, and SCAG's 2020–2045 RTP/SCS. A consistency analysis with these plans for the proposed project is presented below.

City of Long Beach CAAP. The City's proposed CAAP identifies 21 priority GHG reduction actions (referred to as CAAP Actions), which are intended to reduce the City's per-service population GHG emissions. CAAP Actions are in the following sectors: Building and Energy, Transportation, and Waste. Each CAAP Action identifies an implementation lead and partners, general timeline (short, medium, long) and City costs (low, medium, high), co-benefits, implementing sub-actions, and an equity strategy for maximizing benefits of each action for communities most impacted by climate change, including low-income communities of color. Appendix F of the proposed CAAP includes a preliminary set of potential performance metrics associated with each action that will be considered. In addition to ongoing evaluation of efforts towards the GHG reduction target through bi-annual inventories, these will be used to track action-specific outcomes related to GHG reductions, co-benefits, and equity, and complement GHG monitoring as outlined in the Implementation and Monitoring chapter of the proposed CAAP.

The Building and Energy (BE) CAAP Actions are intended to transition the City to renewable energy and increase energy efficiency in existing and new residential, commercial, and municipal buildings. The proposed project would replace an existing office building with a newer building that would be built to the latest Title 24 standards of the California Code of Regulations, regarding water efficiency and energy conservation requirements. In addition, the project would be designed to achieve LEED Silver certification and would include solar panels on the roof, LED lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce

heating and cooling costs. Therefore, the proposed project would comply with the proposed Building and Energy CAAP Actions.

The Transportation (T) CAAP Actions facilitate existing City efforts to increase use of and improve transit service, expand the City's bikeway and pedestrian networks, and increase housing and employment density along major transit corridors. New actions are also included to increase rapid bus service, establish bus-only lanes, and expand electric-vehicle charging infrastructure to further reduce emissions. The proposed project would not generate new vehicle or fire engine trips within the City; therefore, the proposed project would not conflict with the proposed Transportation CAAP Actions.

The Waste (W) CAAP Actions are designed to increase recycling and expand communitywide participation in organic waste collection and diversion. The proposed project would be consistent with the CalRecycle Waste Diversion and Recycling Mandate and would not conflict with the proposed Waste CAAP Actions. As discussed above, the proposed project would comply with the proposed CAAP Actions. Therefore, impacts would be considered less than significant. No mitigation is required.

CARB Scoping Plan. The CARB Scoping Plan is applicable to State agencies but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require the City to adopt policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the State agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other Statewide actions that would affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars program). Although measures in the Scoping Plan apply to State agencies and not the proposed project, the project's GHG emissions would be reduced by compliance with Statewide measures that have been adopted since AB 32 and SB 32 were adopted. Therefore, the proposed project was analyzed for consistency with the goals of AB 32, the AB 32 Scoping Plan, EO B-30-15, SB 32, and AB 197.

AB 32 is aimed at reducing GHG emissions to 1990 levels by 2020. As indicated above, the State met the AB 32 GHG emissions reduction target in 2016. In addition, AB 32 required the CARB to prepare a Scoping Plan outlining the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The AB 32 Scoping Plan has a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,[31] to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent

[31] CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.

below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps the State on the path toward achieving its 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data collected by CARB was posted in December 2016.

As identified above, the AB 32 Scoping Plan contains GHG reduction measures that work towards reducing GHG emissions, consistent with the targets set by AB 32, EO B-30-15 and codified by SB 32 and AB 197. The measures applicable to the proposed project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as discussed below.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As identified above, the proposed project includes the latest Title 24 standards of the California Code of Regulations, regarding water efficiency and energy conservation requirements. In addition, the project would be designed to achieve LEED Silver certification and would include solar panels on the roof, LED lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce heating and cooling costs. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would be required to comply with the latest Title 24 standards of the California Code of Regulations, which includes a variety of different measures, including reduction of wastewater and water use. The proposed project would also include low-flow plumbing fixtures, drought-tolerant plants, and low-flow irrigation systems Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emissions targets for transportation emissions would not directly apply to the proposed project. However, vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

The proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32, the AB 32 Scoping Plan, EO B-30-15, SB 32, and AB 197 and would be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, impacts would be considered less than significant. No mitigation is required.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy. SCAG's 2020–2045 RTP/SCS was adopted September 3, 2020. SCAG's RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2020–2045 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit-oriented communities. The 2020–2045 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as a forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2020–2045 RTP/SCS, would reach the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2020–2045 RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the 2020–2045 RTP/SCS but provides incentives for consistency for governments and developers.

The proposed project includes an approximately 12,780 sf fire station and associated improvements. The proposed project is intended to meet the City's need to replace the original Fire Station No. 9, which was previously located at 3917 Long Beach Boulevard and is slated for demolition due to contamination by toxic mold. The project site is currently developed with an approximately 5,000 sf office building, which would be demolished as a part of the proposed project As such, although the proposed project would generate 42 net new average daily trips in the immediate vicinity of the project site, total Citywide vehicle trips would not be increased. Therefore, the proposed project would not conflict with the 2020–2045 RTP/SCS transportation strategies. In addition, as discussed in Section 4.11, Land Use and Planning, of the Initial Study prepared for the proposed project (Appendix A), the proposed project would not result in physical divisions in any established community.

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. As stated above, the proposed project would not conflict with the goals of the RTP/SCS; therefore, the proposed project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035, and it can be assumed that regional mobile emissions will decrease in line with the goals of the RTP/SCS. Furthermore, the proposed project is not regionally significant per *State CEQA Guidelines* Section 15206 and as such, it would not conflict with the SCAG RTP/SCS targets, since those targets were established and are applicable on a regional level.

Based on the nature of the proposed project, it is anticipated that implementation of the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS. Therefore, the proposed project would not conflict with an adopted plan, policy, or regulation pertaining to GHG emissions, and impacts would be considered less than significant. No mitigation is required.

4.4.7 Level of Significance Prior to Mitigation

The proposed project would result in less than significant impacts related to GHG emissions, and no mitigation is required.

4.4.8 Compliance Measures and Mitigation Measures

No compliance measures are applicable to the proposed project.

4.4.9 Level of Significance after Mitigation

There would be no significant unavoidable adverse impacts related to GHG emissions, and no mitigation is required.

4.4.10 Cumulative Impacts

Cumulative impacts are the collective impacts of one or more past, present, or future projects, that when combined, result in adverse changes to the environment. Climate change is a global environmental problem in which: (a) any given development project contributes only a small portion of any net increase in GHGs, and (b) global growth is continuing to contribute large amounts of GHGs across the world. Land use projects may contribute to the phenomenon of global climate change in ways that would be experienced worldwide, and with some specific effects felt in California. However, no scientific study has established a direct causal link between individual land use project impacts and global warming.

The analysis of impacts related to GHG emissions is inherently cumulative. The proposed project would have no conflict with applicable statewide and regional climate action measures. In addition, as discussed above, the project's operational-related GHG emissions would not exceed the SCAQMD's numeric threshold. Therefore, GHG emissions impacts associated with the proposed project would be less than significant, and therefore the cumulative impact would also be less than significant. No mitigation is required.

4.5 LAND USE AND PLANNING

This section of the Draft Environmental Impact Report (EIR) describes the existing land uses on the proposed Fire Station No. 9 (proposed project) site and in its vicinity and evaluates the compatibility of the proposed project with surrounding land uses and relevant land use policy and planning documents. The consistency analysis in this section was prepared in compliance with the *State California Environmental Quality Act (CEQA) Guidelines* Section 15125(d). Information presented in this section is based on information provided in the following documents: The City of Long Beach's (City) existing General Plan (as amended), the City's Zoning Code (Title 21), and associated Zoning Map, Southern California Association of Government's (SCAG) 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy, and SCAG's 2008 Regional Comprehensive Plan (2008 RCP).

4.5.1 Scoping Process

The Notice of Preparation (NOP) was published in February 2022. The City of Long Beach received 5 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix B of this Draft EIR. No comment letter(s) included comments related to Land Use and Planning.

4.5.2 Existing Environmental Setting

The approximately 0.4-acre project site is located at 4101 Long Beach Boulevard in the City of Long Beach. The project site is located at the northwest corner of Long Beach Boulevard and Randolph Place in the Los Cerritos neighborhood of the City. The project site is surrounded by single-family residential uses to the northwest and west, a restaurant and retail stores directly to the north, multi-family residential uses and office uses to the east across Long Beach Boulevard, and office uses to the south. Local access to the project site is provided by Long Beach Boulevard and Randolph Place. The project site is currently developed with an approximately 5,000 sf single-story office building and related parking and landscaping. The building is currently occupied by Catalina Adventure Tours and would be demolished as part of the proposed project.

The project site is comprised of two parcels (Assessor's Parcel Numbers [APNs] 7139-015-017 and 7139-015-010) that carry two different zoning and General Plan PlaceType designations. APN 7139-015-017 is zoned Community Commercial Automobile-Oriented (CCA) and has a General Plan PlaceType of Neighborhood Serving Center or Corridor Low Density (NSC-L). APN 7139-015-010 is zoned Single-Family Residential, Large Lot (R-1-L) and has a General Plan PlaceType of Founding and Contemporary Neighborhood (FCN). The proposed project would merge the parcels and rezone them to a consistent Mixed Use (MU-1) zoning designation. The proposed project also includes a General Plan Amendment to implement a consistent PlaceType (NSC-L) on the entire project site.

The areas immediately south, north, and east across Long Beach Boulevard of the project site are designated as Neighborhood Serving Center or Corridor Low Density, with residential land use designations surrounding the project site to the west.

4.5.3 Regulatory Setting

4.5.3.1 Federal Policies and Regulations

There are no federal land use policies or regulations that are applicable to the proposed project with respect to land use regulation.

4.5.3.2 State Policies and Regulations

California State Planning and Zoning Law. This law, which is codified in California Government Code Sections 65000-66037, delegates most of the State's local land use and development decisions to cities and counties. The California Government Code establishes specific requirements pertaining to the regulation of land uses by local governments, including general plan requirements, specific plans, subdivisions, and zoning. California Government Code Section 65302 requires that all California cities and counties include the following seven elements in their general plans:

- Land Use
- Circulation
- Housing
- Conservation
- Open Space
- Noise
- Safety

Cities and counties that have identified disadvantaged communities must also address environmental justice in their general plans, including air quality.[1] The City of Long Beach has addressed environmental justice in the Land Use Element of the General Plan (2019a) and is therefore in compliance with Senate Bill (SB) 1000.

Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375). This statute requires California's regional planning agencies to include a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy in their Regional Transportation Plans (RTP). SB 375 was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. Under the law, California's regional planning agencies are required to include an SCS in their RTPs. The SCS provides a plan for meeting the regional emissions reduction targets established by the California Air Resources Board (CARB). If the emissions reduction targets cannot be met through the SCS, an Alternative Planning Strategy (APS) may be developed that shows how the targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures of policies. SB 375 also offers local governments regulatory and other incentives to encourage more compact new development and transportation alternatives.

The requirements of SB 375 are reflected in the 2020–2045 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) adopted by the Southern California Association of

[1] Senate Bill 1000, adopted in 2016, requires both cities and counties that have disadvantaged communities to incorporate environmental justice (EJ) policies into their general plans, either in a separate EJ element or by integrating related goals, policies, and objectives throughout the other elements. This update, or revision if the local government already has EJ goals, policies, and objectives, must happen "upon the adoption or next revision of two or more elements concurrently on or after January 1, 2018."

Governments (SCAG), which serves as the regional planning agency in the six-county metropolitan region composed of Orange, Los Angeles, Ventura, Riverside, San Bernardino, and Imperial Counties. The 2020–2045 RTP/SCS is discussed in further detail below.

4.5.3.3 Local and Regional Plans and Policies

The City is covered by several planning documents and programs that have varying degrees of regulation. The City has preeminent authority over the land uses within the City. The adopted planning documents regulating land use are the City's General Plan, the Zoning Code, and various specific plans.

Applicable regional, local, and conservation land use policies and guidelines from each of these planning documents are described below. In addition, pursuant to *State CEQA Guidelines* Section 15125 (d), the proposed project's consistency with other applicable regional plans and programs, such as the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP), is addressed in the appropriate topical sections of this Draft EIR. The following paragraphs explain the regulations, plans, and policies applicable to the proposed project.

Regional Transportation Plan/Sustainable Communities Strategy. The Southern California Association of Governments (SCAG) is a regional council consisting of the following six counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. In total, the SCAG region encompasses 191 cities and over 38,000 square miles within Southern California. SCAG is the Metropolitan Planning Organization (MPO) serving the region under federal law, and serves as the Joint Powers Authority, the Regional Transportation Planning Agency, and the Council of Governments under State law. As the Regional Transportation Planning Agency, SCAG prepares long-range transportation plans for the Southern California region, including the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the 2008 Regional Comprehensive Plan (RCP).

On September 3, 2020, SCAG adopted the 2020–2045 RTP/SCS (Connect SoCal). The 2020–2045 RTP/SCS is a long-range planning document that provides a common foundation for regional and local planning, policymaking, and infrastructure goals in the SCAG region.[2] The core vision for the 2020–2045 RTP/SCS is to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal includes new initiatives at the intersection of land use, transportation and technology to close the gap and reach greenhouse gas reduction goals. The plan also includes robust financial analysis that considers operations and maintenance costs to ensure the existing transportation system's reliability, longevity, resilience, and cost effectiveness. In addition, Connect SoCal is supported by a combination of transportation and land use strategies that outline how the region can achieve California's greenhouse gas emission reduction goals and federal Clean Air Act requirements. The plan also strives to achieve broader regional objectives, such as the preservation of natural lands, improvement of public health, increased roadway safety, support for the region's vital goods movement industries and more efficient use of resources.

[2] SCAG September 2020. RTP/SCS/ Website: https://scag.ca.gov/read-plan-adopted-final-plan (accessed November 2021).

City of Long Beach General Plan. The City's General Plan establishes goals, policies, and strategies that combine to serve as a "blueprint" for directing future growth in the City. The current General Plan consists of the following 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 Elements. The General Plan Elements that contain goals and policies relevant to the proposed project are briefly described below. The proposed project's consistency with specific relevant goals and policies is discussed in detail in Section 4.5.6.

Land Use Element. The City originally adopted its General Plan Land Use Element (LUE) on July 1, 1989, and subsequently revised it on March 1, 1990, again in April 1997, and again in 2019. This plan formulated the following broad-range goals guiding land use in the City: manage growth, encourage economic development, revitalize the Downtown area, allow for the construction of new housing, encourage the development of affordable housing, emphasize strong neighborhoods, maintain existing public facilities, and maintain and/or improve the circulation system.

The current 2019 LUE includes 14 PlaceTypes, which emphasize flexibility and allow for a mix of compatible uses. Per the 2019 LUE, future development must be consistent with land uses established for each parcel of land and must also be consistent with applicable goals and policies established for the proposed PlaceType.

Public Safety Element The Public Safety Element was adopted in 1975 and most recently updated in 2002. This Element provides goals and policies to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from natural and human-induced hazards. The Public Safety Element specifically addresses urban fire hazards, coastal hazards, geologic hazards, crime prevention, utility-related hazards, hazardous materials, flood hazards, and disaster planning.

Urban Design Element The Urban Design Element was adopted in 2019 and seeks to aid and shape the continued evolution of the urban environment within Long Beach, while at the same time leveraging the unique relationship of the City to its natural environment. This Element of the General Plan is concerned with both the preservation of existing neighborhoods that define its unique character and building upon them to allow for continued adaptation and improvement of the built environment.

City of Long Beach Zoning Code. Zoning is the division of a city or county into districts and the application of development regulations specific to each district. The City's Zoning Code is comprised of both Title 21 and Title 22 of the Municipal Code. Title 22, the Transitional Zoning Code, was adopted by the Long Beach City Council in 2020. Title 22 was established to make the Zoning regulations consistent with the City's 2019 General Plan Update and the PlaceTypes adopted in the LUE. The City intends to fully transition from Title 21 to Title 22. During the transition period, all regulations contained within Title 22 apply to zones established in Title 21. The Zoning Code includes regulations concerning where and under what conditions a business may operate in the City. It also establishes zone-specific height limits, setback requirements, parking ratios, and other development standards, for residential and commercial sites.

The Zoning Code is a primary tool for implementing the City's General Plan. It is the intent of the City that the General Plan LUE and the Zoning Code are consistent to ensure that goals and policies outlined in the General Plan and development standards outlined in the Zoning Code are implemented in a manner that is identifiable with the City's overall vision for the City.

4.5.4 Methodology

The impact analysis of this section considers the physical impacts of the proposed project related to land use compatibility and considers whether or not there are potential inconsistencies of the proposed project with applicable planning documents from the City and other agencies with relevant plans or policies. A determination regarding a project's consistency with an applicable plan is made by the CEQA Lead Agency when it acts on the project. The analysis in this Draft EIR discusses the findings of policy review and is meant to provide a guide for decision-makers during policy interpretation.

A project's inconsistency with a policy is only considered significant if such inconsistency would cause significant physical environmental impacts. This Draft EIR section determines whether any project inconsistencies with public land use policies and documents would be significant and whether mitigation is feasible. Under this approach, a policy conflict is not in and of itself considered a significant environmental impact. An inconsistency between a proposed project and an applicable plan is a legal determination that may or may not indicate the likelihood of environmental impact. In some cases, an inconsistency may be evidence that an underlying physical impact is significant and adverse, while in other cases such an inconsistency may not result in significant physical impacts.

4.5.5 Thresholds of Significance

The following thresholds of significance criteria are based on Appendix G of the *State CEQA Thresholds of Significance.* Based on these thresholds, implementation of the proposed project would have a significant adverse impact related to land use and planning if it would:

Threshold 4.5.1: Physically divide an established community

Threshold 4.5.2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

The Initial Study, included as Appendix A, substantiates that impacts associated with Threshold 4.5.1 would be less than significant.

The project site is currently developed with an office building and is located within a largely developed portion of the City of Long Beach. Vehicular access to the project site would be provided via the alleyway north of the project site and Randolph Place, both of which are existing public streets. There would be no changes to the existing roadways that would divide the community. The proposed project would serve as a replacement to the original Fire Station No. 9, which was located at 3917 Long Beach Boulevard, approximately two blocks south of the project site. As the original Fire Station No. 9 operated at 3917 Long Beach Boulevard for more than 81 years, the proposed project would not introduce a new land use to the Los Cerritos neighborhood that would create a

physical division. Therefore, construction and implementation of the project would not result in the physical division of an established community, and no mitigation would be required. This threshold will not be further addressed in the following analysis.

4.5.6 Project Impacts

Threshold 4.5.2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The project site is under the City's land use planning and regulatory jurisdiction. Several regionally and locally adopted land use plans, policies, and regulations would be applicable to the proposed project, including the SCAG 2008 Regional Comprehensive Plan, Connect SoCal (the SCAG 2020–2045 RTP/SCS), the City of Long Beach General Plan, and the Long Beach Zoning Code.

Southern California Association of Governments Regional Comprehensive Plan (RCP). The RCP addresses issues such as housing, traffic, air quality, and water resources as a guide for local agencies to use in preparing plans that deal with regional issues. The RCP outlines a vision of how the Southern California region can balance growth with conservation in order to achieve a higher quality of life. In order to achieve this balance, the RCP aims to establishes the following land use goals: (1) focus growth in existing centers and along major transportation corridors, (2) encourage mixed-use development, (3) provide new housing opportunities, (4) encourage development near existing and planned transportation stations to reduce traffic congestion and associated air pollutants, (5) preserve existing single-family neighborhoods, and (6) protect open space and environmentally sensitive habitat areas from development. The proposed project does not include new housing or mixed-use development. There are no environmentally sensitive habitat areas on or adjacent to the project site. Therefore, Goals 2, 3, 4 and 6 are not applicable to the proposed project and are not discussed further in the following RCP consistency analysis below.

The project site is located along Long Beach Boulevard, which is a four-lane roadway classified in the City's Mobility Element as a Boulevard. The proposed project would include the demolition of the existing 5,000 sf office building onsite, associated landscaping and parking areas within the project site and would develop a two-story fire station building, associated landscaping, parking areas, and off-site improvements. Therefore, the proposed project would redevelop the site from a commercial land use to a public facility land use. Uses proposed as part of the project would be easily accessed from Long Beach Boulevard and other key roadways. There are no bike lanes along Long Beach Boulevard in the project site's vicinity. Overall, the project would be consistent with RCP Goal 1 to focus growth along major transportation corridors.

The closest residential neighborhood is located adjacent to the west and north of the project site. However, as noted throughout this Draft EIR, the proposed project would not interfere or conflict with the existing land use patterns and visual character of established residential neighborhoods near the site and would not result in any potentially significant nuisance impacts. In addition, the purpose of the fire station is to provide firefighting services within the Fire

Station No. 9 service area, including residential development. Therefore, the project would be consistent with RCP Goal 5 of preserving existing single-family neighborhoods.

The project site does not include protected open space or environmentally sensitive habitat, as it is currently developed with this existing 5,000 sf office building and associated parking and infrastructure. Compliance with Compliance Measures HYD-1 and HYD-2, as provided in Chapter 2.0, would ensure that impacts related to violation of any water quality standards or waste discharge requirements, and degradation of surface water or groundwater quality during project construction and operation would be less than significant.

For the reasons stated above, the proposed project would be consistent with applicable goals and policies in SCAG's 2008 RCP.

City of Long Beach General Plan. The City's General Plan contains goals, policies, and programs that are intended to guide future land use and development decisions. The current General Plan consists of the Air Quality, Conservation, Historic Preservation, Housing, Land Use, Local Coastal Program, Mobility, Noise, Open Space and Recreation, Public Safety, Seismic Safety, and Urban Design Elements.

Land Use Element. At the heart of the General Plan is the Land Use Element (LUE), adopted in 2019. The LUE establishes land uses and develops a long-term land use vision for these land uses throughout the City. A consistency analysis table (provided later in this section) includes a list of applicable goals and policies from the City's General Plan and the proposed project's consistency with each goal and policy. The project site is currently comprised of APNs 7139-015-017 and 7139-015-010 and has two PlaceType designations. As detailed in Table 4.5.A, APN 7139-015-017 has a General Plan PlaceType of Neighborhood Serving Center or Corridor Low Density (NSC-L) and APN 7139-015-010 has a General Plan PlaceType of Founding and Contemporary Neighborhood (FCN). The proposed project would merge the parcels and includes a General Plan Amendment (GPA) to implement a consistent PlaceType of (NSC-L) on the entire project site. As stated in the General Plan Land Use Element, the development of a fire station is consistent with the permitted uses allowed under the NSC-L Placetype designation.

Table 4.5.A: PlaceType and Zoning Changes

APN	Zoning Designation		General Plan PlaceType	
	Existing Zoning	Proposed Zoning	Existing PlaceType	Proposed PlaceType
7139-015-010	Single-Family Residential, Large Lot (R-1-L)	Mixed Use (MU-1)	Founding and Contemporary Neighborhood (FCN).	Neighborhood Serving Center or Corridor Low Density (NSC-L)
7139-015-017	Community Commercial Automobile-Oriented (CCA)	Mixed Use (MU-1)	Neighborhood Serving Center or Corridor Low Density (NSC-L)	Neighborhood Serving Center or Corridor Low Density (NSC-L) – No Change

The overall height of the proposed project is two stories tall, or 32 ft, 6 inches. The NSC-L PlaceType has a height limit of three stories (38 ft). However, with approval of the requested GPA consolidating both parcels under the NSC-L PlaceType, the proposed project would be consistent with the NSC-L height limit of three stories (38 ft).

As stated in the LUE, the standard intensity of development for the NSC-L designation is a Floor Area Ratio (FAR)[3] of 0.5 to 1.0. The proposed project includes 5,543 sf of non-residential space and 7,122 sf in residential space. The total lot area for the proposed project is 16,829 sf. The proposed project would result in a FAR of approximately 0.76. Therefore, the proposed project would be consistent with the development intensity regulations established for the NSC-L land use.

As described above in Table 4.5.A, the proposed project would be consistent with applicable goals and policies contained in the City's General Plan Land Use, Urban Design, Public Safety, Mobility, Noise, Seismic Safety and Historic Preservation Elements. See Table 4.5.B, below. As discussed above, the GPA to consolidate the PlaceType designation for the project site to NSC-L would ensure consistency between the proposed project and the General Plan Land Use Element as fire stations are an allowable use in the NSC-L PlaceType. Therefore, impacts related to potential conflicts with the City's General Plan are anticipated to be less than significant, and no mitigation is required.

Long Beach Zoning Code. Zoning is the division of a city into districts and the application of development regulations specific to each district. The Zoning Code is a primary tool for implementing the City's General Plan. The City of Long Beach Zoning Code is contained in Title 21 and Title 22 of the Municipal Code. Title 22, the Transitional Zoning Code, was adopted by the City in 2020 and has been established to make the Zoning regulations consistent with the City's 2019 General Plan Update and the PlaceTypes adopted in the LUE. The Zoning Code establishes zone-specific height limits, setback requirements, parking ratios, and other development standards.

As stated above, the project site is comprised of two parcels that carry two different zoning classifications; CCA and R-1-L. The proposed project would merge the subject parcels and rezone them to a MU-1 zoning designation, which is compatible with the existing and proposed NSC-L PlaceType.

[3] Floor area ratio is the ratio of a building's total (gross) floor area to the size of the piece of land on which it is built.

Table 4.5.B: General Plan Consistency Analysis

General Plan Policy or Goal	Project Consistency
Land Use Element (2019)	
Goal No. 1: Implement Sustainable Planning and Development Practices	**Consistent.** The project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification and would include solar panels on the roof, low-flow plumbing fixtures, LED lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce heating and cooling costs. One parking space would be reserved for low-emissions vehicles. As such, the proposed project would be consistent with Goal No. 1 of the LUE to implement sustainable planning and development practices.
LU Policy 1-4: Require electric vehicle charging stations to be installed in new commercial, industrial, institutional and multiple-family residential development projects. Require that all parking for single-unit and two-unit residential development projects be capable of supporting future electric vehicle supply equipment	**Consistent.** The proposed project would include a total of 11 parking spaces, two of which would be electric vehicle charging spaces. Therefore, the proposed project would be consistent with LU Policy 1-4.
LU Policy 1-6: Require that new building construction incorporate solar panels, vegetated surface, high albedo surface and/or similar roof structures to reduce net energy usage and reduce the heat island effect.	**Consistent.** The project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification and would include solar panels on the roof, low-flow plumbing fixtures, LED lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce heating and cooling costs. Therefore, the proposed project would be consistent with LU Policy 1-6.
LU Policy 1-10: In addition to analyzing project and plan impacts on Levels of Service and Stop Delay, analyze Vehicle Miles Traveled consistent with the State's guidelines.	**Consistent.** Impacts on Levels of Service with the proposed project were evaluated in the Initial Study (Appendix A) and Section 4.7, Transportation. Potential impacts associated with the proposed project were found to be consistent with State CEQA Guidelines Section 15064.3. Based on the project's typical operations and temporary construction activities, the project is not anticipated to result in any LOS or operational deficiencies to the surrounding circulation system. Additionally, the City of Long Beach Traffic Impact Analysis Guidelines (June 2020) Section 2.2.4 discusses screening and thresholds for other land use types and determines that public services that support community health, safety, and welfare will be presumed to have a less than significant impact related to *State CEQA Guidelines* Section 15064.3, subdivision (b). The proposed project would replace an existing temporary fire station with another fire station within the same service area. VMT generated by the proposed project is likely to be similar to the VMT generated by the fire station being replaced. Therefore, the proposed project's impacts on LOS and VMT would be consistent with Land Use Policy 1-10.

Table 4.5.B: General Plan Consistency Analysis

General Plan Policy or Goal	Project Consistency
Goal No. 3: Accommodate Strategic Growth and Change	**Consistent.** The proposed project would be consistent with this goal because the proposed project includes fire protection services intended to provide protection for land uses, as identified in the LUE, from fire and safety hazards. The LUE identified specific areas for targeted growth. The proposed project would help meet this goal of accommodating strategic growth and change by providing adequate and improved fire protection services for the service area of Fire Station No. 9. Therefore, the proposed project would be consistent with Goal No. 3 of the LUE.
Urban Design Element (2019)	
Goal No. 1: Creating Great Places	**Consistent.** As described in the UDE, creating great places allows for friends and strangers to interact in a space that encourages activity, spontaneity, exploration, and discovery. Great Places encourage businesses to relocate for both the quality of life of employees and their families. The proposed project would improve the City's fire protection services, which are necessary to create and maintain a City that encourages activity, spontaneity, exploration, and discovery. Therefore, the proposed project would be consistent with Goal No. 1 of the UDE.
Goal No. 2: Urban Fabric	**Consistent.** As described in the UDE, defining patterns within the existing urban fabric successfully expresses what makes Long Beach unique, and is reflective of the neighborhoods and context of the City. It allows for the establishment of new development patterns that do not detract from successful, historical development patterns, but rather builds upon and celebrates the pre-existing urban fabric, both natural and man-made, as a component of place. As discussed in Section 4.2, Cultural Resources, the proposed project would not detract from historical development. Therefore, the proposed project would be consistent with Goal No. 2 of the UDE.
Mobility Element (2013)	
Goal No. 1: Create an efficient, balanced, multimodal mobility network.	**Consistent.** As discussed in Section 4.7, Transportation, the proposed project would not have a significant impact on Level of Service or result in operational deficiencies to the surrounding circulation system. Therefore, the proposed project would be consistent with Goal No. 1 of the Mobility Element.
Noise Element (1975)	
Goals Related to the Noise Environment Goal No. 1: Prevent the loss of relatively quiet areas of Long Beach by regulating potential noise sources.	**Consistent.** As discussed in Section 4.6, Noise, the proposed project would adhere to Compliance Measure NOI-1, which requires that City staff verify that grading and construction plans would reduce construction noise to the extent feasible and reasonable. The proposed project would also be required to implement mitigation measures that would reduce both construction and long-term stationary source noise impacts to a less than significant level. Mitigation Measure NOI-1 requires the selection of HVAC equipment that has a combined noise level rating of 76 dBA or four (4) individual units that are each 70 dBA or less when measured at 5 ft, to reduce potential noise to levels consistent with City regulations. With implementation of Mitigation Measure NOI-1, the noise level impacts from the

Table 4.5.B: General Plan Consistency Analysis

General Plan Policy or Goal	Project Consistency
	proposed HVAC systems would be reduced to less than the existing quietest nighttime noise levels and, therefore, would be reduced to a less than significant level. Due to the close proximity to surrounding structures, the proposed project would also be required to implement Mitigation Measure NOI-2, provided in Section 4.6, Noise, of this Draft EIR, which requires the construction contractor to implement practices including, but not limited to, developing a vibration monitoring and construction contingency plan, and monitoring vibration during initial demolition. Residents or other sensitive-noise receptors in the immediate vicinity of the proposed project may experience periodic exposure to high noise levels due to the use of fire engine sirens. Due to the short-term nature of these noise events, and because the City's Municipal Code Section 8.80.250 exempts emergency operations, this impact would be considered less than significant. Therefore, the proposed project would be consistent with Goals Related to the Noise Environment Goal No. 1.
Goals Related to Construction and Industrial Noise Goal No. 1: To reduce the level of noise exposure to the population caused by demolition and construction activities.	**Consistent.** As discussed in Section 4.6, Noise, despite construction noise resulting in noise levels be higher than the ambient noise in the vicinity of the project site, construction noise would cease once project construction is completed. Compliance Measure NOI-1 would implement several best practices for reducing construction noise, but not limited to, maximizing the distance between noise sources and sensitive receptors during construction activities, equipping construction equipment with properly operating and maintained noise mufflers, and establishing a noise disturbance coordinator for the proposed project. Additionally, Compliance Measure NOI-1 requires that construction activities shall only occur between the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday and federal holidays; or between 9:00 a.m. to 6:00 p.m. on Saturdays. Additionally, construction shall not occur on Sundays. Therefore, the proposed project would be consistent with the City's policy of requiring that noise generated by construction activities be evaluated. Implementation of Compliance Measure NOI-1 during construction would reduce noise impacts to the greatest extent feasible. Therefore, the proposed project would be consistent with Goals Related to Construction and Industrial Noise Goal No. 1.
Public Safety Element (2002)	
Management Goal No. 1: Develop mechanisms for implementing improved safety considerations.	**Consistent.** The proposed project would construct a new permanent fire station within the Fire Station No. 9 service area that would be consistent with the Long Beach Fire Department response goals. Additionally, the proposed project would provide a safe and healthy workplace for the Fire Station No. 9 crewmembers. Safety and fire services in the City would be enhanced by the proposed project, therefore the proposed project is consistent with Management Goal No. 1.

Table 4.5.B: General Plan Consistency Analysis

General Plan Policy or Goal	Project Consistency
Management Goal No. 3: Continue to coordinate safety matters throughout the City and introduce methods of ensuring improved safety.	**Consistent.** As discussed above, the proposed project would construct a new permanent fire station within the Fire Station No. 9 service area. Therefore, the proposed project would improve methods of ensuring safety within the City and is consistent with Management Goal No. 3.
Development Goal No. 3: Provide an urban environment, which is as safe from all types of hazards as possible.	**Consistent.** The proposed project would provide a fire station in compliance with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards for fire station design. The proposed project would improve fire safety for the urban environment in the City by constructing a new permanent fire station within the Fire Station No. 9 service area. Therefore, the proposed project is consistent with Development Goal No. 3.
Development Goal No. 5: Use physical planning as a means of achieving greater degrees of protection from safety hazards.	**Consistent.** The proposed project would improve fire safety and protection for the City by constructing a new permanent fire station within the Fire Station No. 9 service area. Therefore, the proposed project is consistent with Development Goal No. 3.
Development Goal No. 9: Encourage development that would augment efforts of other safety related Departments of the City (i.e., design for adequate access for firefighting equipment and police surveillance).	**Consistent.** Access to and from the project site will be designed to City standards and would be subject to review by the LBFD and the Long Beach Police Department (LBPD) for compliance with fire and emergency access standards and requirements. Therefore, potential impacts related to emergency response and evacuations plans during operation would be less than significant and the proposed project would be consistent with Development Goal No. 9.
Protection Goal No. 3: Reduce public exposure to safety hazards.	**Consistent.** The proposed project provides a permanent fire station within the Fire Station No. 9 service area and assists in reducing fire safety hazards. In addition, as discussed in the Hazards and Hazardous Materials section of the Initial Study l (Appendix A), the proposed project would not result in any significant impacts associated with hazards or the use of hazardous materials. Therefore, the proposed project would be consistent with Protection Goal No. 3.
Protection Goal No. 7: Protect the citizens against possible personal loss resulting from disaster events.	**Consistent.** As discussed in the Initial Study, located in (Appendix A), the proposed project would not result in significant impacts to public services including, fire protection and police protection. The establishment of a permanent fire station in service area No. 9 would ensure that residents are protected in the event of a fire or other disaster, and that the risk for personal loss would be reduced. Therefore, the proposed project would be consistent with Protection Goal No. 7.
Protection Goal No. 10: Provide the maximum feasible level of public safety protection services.	**Consistent.** The establishment of a permanent fire station in service area No. 9 would ensure that residents are provided public safety protection services consistent with the service goals of the Fire Department. Therefore, the proposed project would be consistent with Protection Goal No. 10.

Table 4.5.B: General Plan Consistency Analysis

General Plan Policy or Goal	Project Consistency
Historic Preservation Element (2010)	
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.	**Consistent.** As discussed in the Initial Study (Appendix A), a Historic Resources Evaluation (LSA 2021) was prepared for the proposed project. The Historic Resources Evaluation determined that the existing building onsite is not considered a historic resource and no evidence was found that it is associated with any historically significant people or is the work of a master. As discussed in Section 4.2, Cultural Resources, the proposed project would not result in significant impacts to archaeological or cultural resources. Therefore, the proposed project is consistent with Policy 1.1 of the Historic Preservation Element of the City's General Plan.

Source: City of Long Beach General Plan, as amended.

The overall height of the proposed project would be 32 ft, 6 inches. The proposed fire station building would be consistent with the existing and proposed MU-1 zoning designation, which has a three-story, 45 ft height limit.

As stated in the Title 22 of the City of Long Beach Zoning Code, the standard intensity of development for the MU-1 zoning designation is a FAR of 0.25 and the maximum intensity of development is a FAR of 1.0. As discussed above, the proposed project would result in a FAR of approximately 0.76. Therefore, the proposed project would be consistent with the development intensity regulations established for the MU-1 zoning designation.

Therefore, approval of the Zoning Amendment to rezone the project site to MU-1 would ensure the proposed project's consistency with the City's established development standards, and no mitigation would be required.

4.5.7 Level of Significance Prior to Mitigation

There would be no potentially significant impacts related to land use and planning.

4.5.8 Compliance Measures and Mitigation Measures

No compliance measures are applicable to the proposed project.

The proposed project would not result in any significant adverse impacts related to land use and planning, and no mitigation would be required.

4.5.9 Level of Significance after Mitigation

There would be no significant unavoidable adverse impacts of the proposed project related to land use and planning. No mitigation is required.

4.5.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines,* cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for land use. The cumulative impact area for land use for the proposed project is the City of Long Beach. Several mixed use and residential development projects are approved and/or pending within the City. All proposed development in the City, would be subject to its own General Plan consistency analysis and would be reviewed for consistency with adopted land use plans and policies.

As described above, the proposed project would merge the parcels on the project site and include a GPA to implement a consistent PlaceType of NSC-L on the entire project site. As stated in the General Plan Land Use Element, the development of a fire station is consistent with the permitted uses of the NSC-L Placetype designation. Approval of the General Plan Amendment and Zoning Amendment would ensure the proposed project's consistency with the City's established development standards, and no mitigation would be required. Therefore, cumulative land use impacts with respect to consistency with adopted land use plans and policies would be less than significant.

The proposed project would include land uses that are consistent with the surrounding development and therefore would not contribute to a pattern of development that would adversely impact adjacent land uses or conflict with existing or planned development. As discussed further above, proposed on-site improvements would be consistent with the long-range planning goals of local and regional governing plans and policies for the surrounding area.

There are no incompatibilities between the proposed project and planned future projects in the City, which primarily include mixed-use and residential developments. Proposed projects in the City would be reviewed for consistency with adopted land use plans and policies by the City. For this reason, current and future projects are anticipated to be consistent with applicable General Plan and zoning requirements or would be subject to allowable exceptions. Further, each discretionary project would be subject to CEQA, mitigation requirements, and design review, as applicable. Therefore, the proposed project would not contribute a significant cumulative land use compatibility impact in the City, and no mitigation is required.

4.6 NOISE

This section evaluates the potential short-term and long-term noise and vibration impacts associated with the construction and operation of potential development that would be allowed under the proposed Fire Station No. 9 Project (proposed project). This analysis is intended to satisfy the City of Long Beach's (City) requirement for a project noise impact analysis by examining the short-term construction and long-term operational impacts on on-site and off-site land uses involving sensitive receptors and evaluating the effectiveness of proposed mitigation measures. Supporting calculations are presented in Appendix F of this Draft Environmental Impact Report (EIR).

4.6.1 Scoping Process

The City of Long Beach received five comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix B of this Draft EIR. Three comment letters included comments related to noise and vibration.

The letter from David and Kathy Walker received on February 22, 2022, suggested the testing of fire equipment be done at an early or late afternoon shift change due to the nearby residences. The letter from Stephanie Booth received on February 28, 2022, expressed concern that noise and vibration generated by the fire trucks could disturb the residents and visitors to the small businesses in the area. The letter from John Millen received on March 22, 2022, expressed concern regarding noise generated by fire trucks using the alley north of the project site on both residents and nearby merchants. The letter further suggested to limit the alley access between the hours of 9:00 a.m. and 5:00 p.m.

4.6.2 Fundamentals of Noise and Vibration

4.6.2.1 Characteristics of Sound

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 dB represents a tenfold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements, which better represent how humans are more sensitive to sound at night.

As noise spreads from a source, it loses energy; therefore, the farther away the noise receiver is from the noise source, the lower the perceived noise level. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise-sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels. CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours), and a 10 dBA weighting factor applied to noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. For transportation-related noise impacts, the City of Long Beach uses the L_{dn} rating scale. Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

4.6.2.2 Characteristics of Vibration

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors where the motion may be discernible. However, without the effects associated with the shaking of a building, there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Building damage is not a factor for normal operation and construction activities with the occasional exception of blasting and pile driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 VdB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet (ft) of the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 ft. When roadways

are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. For most projects, it is assumed that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, construction activities have the potential to result in ground-borne vibration that could be perceptible and annoying. Ground-borne noise is not likely to be a problem because noise arriving via the normal airborne path usually will be greater than ground-borne noise.

Ground-borne vibration has the potential to disturb people as well as damage buildings. Although it is very rare for ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile driving to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). RMS is best for characterizing human response to building vibration, and PPV is used to characterize the potential for damage to structures.

4.6.3 Existing Environmental Setting

4.6.3.1 Sensitive Uses in the Project Vicinity

Noise-sensitive receptors in the City include residences, schools, hospitals, churches, and similar uses that are sensitive to noise. Construction and operation of the project could adversely affect nearby noise-sensitive land uses such as single-family residences to the northwest and southwest. Residential land uses to the southwest are located directly adjacent to the project site and residential land uses to the northwest of the project site are located across the alleyway.

4.6.3.2 Overview of the Existing Noise Environment

In the City of Long Beach, the dominant source of noise is transportation noise, including vehicular traffic, rail, and airport noise. Industrial and mechanical equipment are also contributors to the noise environment in the City, as are intermittent sources such as construction equipment and leaf blowers. Noise from motor vehicles is generated by engine vibrations, the interaction between the tires and the road, and the exhaust systems. Airport-related noise levels are primarily associated with aircraft engine noise made while aircraft are taking off, landing, or running their engines while still on the ground. Existing noise sources are further discussed below.

Ambient Noise Levels. To assess existing noise levels, LSA conducted two long-term (24-hour) noise measurements in the area on November 2, 2021. Noise monitoring locations are shown in Figure 4.6-1. The results of the noise measurements are shown in Table 4.6.A below. The long-term noise measurements indicate that ambient noise in the project vicinity ranges from approximately 60.2 dBA to 62.8 dBA L_{dn}. Traffic on surrounding roadways was reported as the primary noise source.

Existing Roadway Noise Levels. Motor vehicles with their distinctive noise characteristics are one of the primary sources of noise in Long Beach. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. The major contributing roadway noise source in the project vicinity is Long Beach Boulevard with distant sources such as Interstates 710 (I-710) and 405 (I-405) and other arterial and collector roadways throughout the City.

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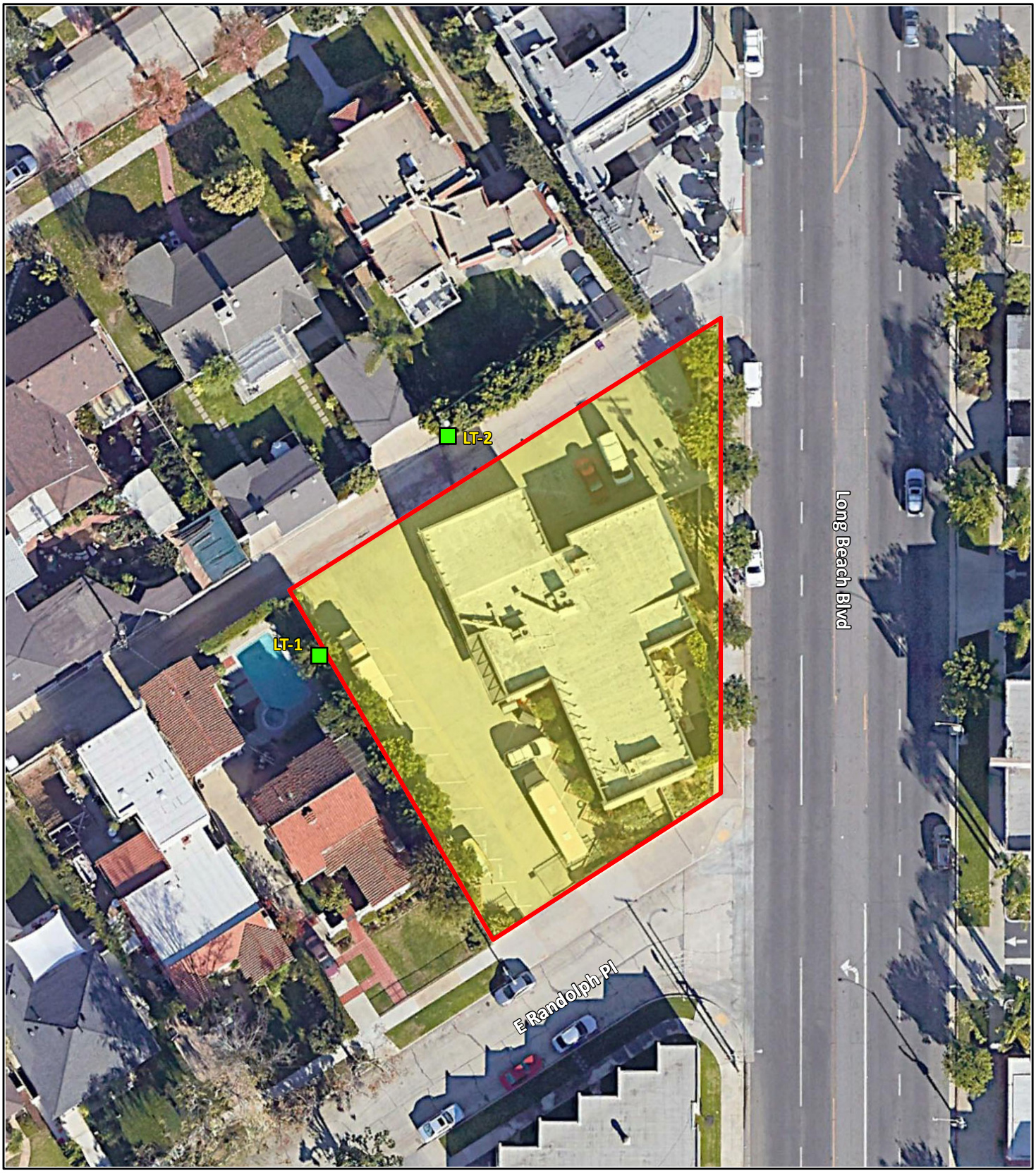

LSA

FIGURE 4.6-1

LEGEND

Project Site

LT-1 Long-Term Noise Monitoring Locations

N

0 22.5 45

FEET

SOURCE: Google Earth 2021

I:\CLB1904.26\G\Noise_Locs.ai (1/10/2022)

Fire Station No. 9 Project

Noise Monitoring Locations

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Table 4.6.A: Existing Noise Level Measurements

Location	Description	Daytime Noise Levels[1] (dBA L_{eq})	Nighttime Noise Levels[2] (dBA L_{eq})	Daily Noise Level (dBA L_{dn})
LT-1	Western edge of project site, south of alleyway. Approximately 130 ft northwest of the centerline of East Randolph Place.	53.3–58.9	49.5–55.9	60.2
LT-2	In alleyway north of project site, on a utility pole. Approximately 115 ft west of the centerline of Long Beach Boulevard.	55.2–61.3	51.5–59.0	62.8

Source: LSA (November 2021).
[1] Daytime Noise Levels = noise levels during the hours of 7:00 a.m. to 10:00 p.m.
[2] Nighttime Noise Levels = noise levels during the hours of 10:00 p.m. to 7:00 a.m.
dBA = A-weighted decibel
ft = foot/feet
L_{dn}= Day-Night Average Level
L_{eq} = the average noise level during a specific hour
LT = long-term measurement

Existing Rail Noise Levels. Currently, three freight rail lines and one light rail line (the A line, formerly the Blue Line) pass through the City. The freight lines are operated by Burlington Northern Santa Fe (BNSF) Railway, the Union Pacific Railroad (UPRR), and Pacific Harbor Line Incorporated (PHL). The rail lines run north-south through the west side of the City, and through the northwest corner of the City, around the neighborhood of North Long Beach. The light rail line is operated by Metro Rail and runs generally north and south through the City along Long Beach Boulevard and Pacific Place. These rail lines in the City are not likely to be a dominant ambient source of noise at the project site.

Existing Stationary Source Noise Levels. A wide variety of existing stationary sources contribute to noise throughout the City of Long Beach, which include heating ventilation and cooling (HVAC) mechanical systems, delivery truck idling and loading/unloading activities, and recreational and parking lot activities (such as slamming car doors and people talking). Of these noise sources, noise generated by delivery truck activity typically generates the highest maximum noise levels. Other sources of stationary noise include commercial centers and industrial zones that emit noise during operation. Domestic noise sources, such as leaf blowers, can also contribute to the existing noise environment.

Existing Airport Noise Levels. Long Beach Airport is a public airport centrally located in the City, approximately 2.5 miles southeast of the project site. This airport has passenger flights and is restricted by ordinances that minimize airport-related noise. In addition, several charters, private aviation, flight schools, law enforcement flights, helicopters, advertising blimps, and planes towing advertising banners frequently operate from this airport.

Operations at the Long Beach Airport typically occur within the daytime hours of 7:00 a.m. to 10:00 p.m., with the exception of occasional unscheduled landings that occur after 10:00 p.m., and emergency and police helicopter activities. The Long Beach Airport Community Guide to Aircraft

Noise presents factual information on the City of Long Beach Airport Noise Compatibility Ordinance (Long Beach Municipal Code Chapter 16.43) and Long Beach Airport's efforts to minimize aircraft noise over nearby neighborhoods. While the City is not able to control the flight paths, typical operations include approaches from the southeast of the airport and departures taking off in a northwest direction.

Other airports with aircraft activity that affect the ambient noise environment within the City limits include Los Angeles International Airport and John Wayne Airport. Los Angeles International Airport is located approximately 13 miles northwest of the project site, and John Wayne Airport is located approximately 21 miles southeast of the project site. Although noise from aircraft activity is occasionally audible throughout the City, the project site is not located within the 65 dBA CNEL noise contour of either of these airports.

4.6.3.3 Existing Vibration Sources

Major vibration sources in the City include construction activities, rail operations, and heavy vehicle traffic. Other sources which have the potential to cause vibration impacts are aircraft operations, low-frequency music and some stationary sources. Similar to noise standards, cities can adopt vibration exposure standards regarding the sensitivity of land uses which may be affected. In relation to vibration impacts, there are two factors that are considered to assessing the level of impact expected: the potential for damage to a building or structure and the potential of annoyance to people. Also similar to potential noise impacts, the most efficient actions to help reduce vibration impacts occur during the planning and permitting phases of any project or development.

4.6.4 Regulatory Setting

The following section summarizes the regulatory framework related to noise, including federal, State and City of Long Beach plans, policies, and standards.

4.6.4.1 Federal Regulations

United States Environmental Protection Agency. In 1972, Congress enacted the United States Noise Control Act. This act authorized the United States Environmental Protection Agency (USEPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels). For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to 70 dBA during a 24-hour period of time. At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 11 ft, with no community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance. The USEPA cautions that these identified levels are guidelines, not standards.

Federal Vibration Impact Standards. Since the City's Noise Element does not include specific criteria for assessing vibration impacts, it suggests that for the purpose of determining the significance of vibration impacts experienced at sensitive uses surrounding the project, the guidelines within the Federal Transit Administration's (FTA) 2018 *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual) should be used to determine vibration impacts.

Vibration standards included in the FTA Manual are used in this analysis for ground-borne vibration impacts on human annoyance, as shown in Table 4.6.B, which provides the criteria for assessing the potential for interference or annoyance from vibration levels in a building.

Table 4.6.B: Interpretation of Vibration Criteria for Detailed Analysis

Land Use	Max L_v (VdB)[1]	Description of Use
Workshop	90	Distinctly feelable vibration. Appropriate to workshops and non-sensitive areas.
Office	84	Feelable vibration. Appropriate to offices and non-sensitive areas.
Residential Day	78	Feelable vibration. Appropriate for computer equipment and low-power optical microscopes (up to 20X).
Residential Night and Operating Rooms	72	Vibration not feelable, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100X) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] As measured in 1/3-Octave bands of frequency over the frequency range 8 to 80 Hertz.
FTA = Federal Transit Administration
L_V = velocity in decibels
VdB = vibration velocity decibels

The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. Table 4.6.C lists the potential vibration building damage criteria associated with construction activities, as suggested in the 2018 FTA Manual. FTA guidelines show that a vibration level of up to 0.5 in/sec in PPV (FTA 2018) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster) and would not result in any construction vibration damage. For a nonengineered timber and masonry building, the construction building vibration damage criterion is 0.2 in/sec in PPV.

Table 4.6.C: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
FTA = Federal Transit Administration
in/sec = inch/inches per second
PPV = peak particle velocity

4.6.4.2 State Regulations

There are no specific State regulations that are applicable to the proposed project. The State of California requires each jurisdiction to establish applicable noise criteria and the City has done so within the General Plan and Municipal Code as described below.

4.6.4.3 Local and Regional Policies and Regulations

City of Long Beach General Plan Noise Element. California Government Code Section 65302(g) requires that a noise element be included in the General Plan of each county and city in the State. The Noise Element of the City's General Plan is intended to identify sources of noise and provide objectives and policies that ensure that noise from various sources does not create an unacceptable noise environment. Overall, the City's Noise Element describes the noise environment (including noise sources) in the City, and addresses noise mitigation regulations, strategies, and programs, as well as delineates federal, State, and City jurisdiction relative to rail, automotive, aircraft, and nuisance noise. The Noise Element currently in the process of being updated and the latest guidelines and noise limits are included in the December 2019 Draft Noise Element of the General Plan 2040 Update.

City of Long Beach Municipal Code. The City of Long Beach addresses noise impacts in the Municipal Code Title 8: Health and Safety, Chapter 8.80, Noise, and sets regulations to minimize airport noise in the Municipal Code Title 16: Public Facilities and Historical Landmarks, Chapter 16.43, Airport Noise Compatibility.[1] The Municipal Code establishes exterior and interior noise standards at receiving land uses and establishes permitted hours of construction activity noise as described below.

Chapter 8.80, Noise, establishes exterior and interior noise limits for the generation of sound within the City. The maximum noise levels vary based on the receiving land use type and the cumulative duration of noise. The City's Noise Ordinance also limits noise generated by construction. The Municipal Code restricts construction activities to weekdays and federal holidays between the hours of 7:00 a.m. and 7:00 p.m. and on Saturdays, restricts construction to between the hours of 9:00 a.m. and 6:00 p.m., except for emergency work. Construction work on Sundays is prohibited unless the City's Noise Control Officer issues a permit. The permit may allow work on Sundays between 9:00 a.m. and 6:00 p.m. Additionally, Chapter 16.43, Airport Noise Compatibility, establishes cumulative noise limits and noise budgets for properties in the vicinity of the Airport. The Municipal Code establishes a goal that incompatible property in the vicinity of the airport shall not be exposed to noise above 65 dBA CNEL.

Loading and unloading activities are also regulated under the City's Noise Ordinance. The ordinance states that loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10:00 p.m. and 7:00 a.m. is restricted to the noise level provisions of Exterior Noise Limits shown in Table 4.6.D and the Interior Noise Limits shown in Table 4.6.E.

Additionally, the City's Noise Ordinance states that operating or permitting 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 ft from the source if on a public space or public right-of-way, is prohibited.

[1] City of Long Beach. 2019. Municipal Code. February.

Table 4.6.D: Maximum Exterior Local Noise Criteria

Receiving Land Use District	Maximum Noise Criteria (dB L_{max})	
	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
District One — Predominantly residential with other land use types also present	50	45
District Two — Predominantly commercial with other land use types also present	60	55
District Three[1] — Predominantly industrial with other land use types also present	65	65
District Four[1] — Predominantly industrial with other land types use also present	70	70
District Five — Airport, freeways, and waterways regulated by other agencies	Regulated by other agencies and laws	

Source: City of Long Beach Municipal Code (adopted 1977, most recent revision 2009).
[1] Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.
dB = decibel(s)
L_{max} = maximum instantaneous noise level

Table 4.6.E: Interior Noise Limits

Receiving Land Use District	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)
All	Residential	10:00 p.m.–7:00 a.m. 7:00 a.m. –10:00 p.m.	35 45
All	School	7:00 a.m. –10:00 p.m. (while school is in session)	45
Hospital, designated quiet zones, and noise-sensitive zones		Any time	40

Source: City of Long Beach Municipal Code (adopted 1977, most recent revision 2009).
dBA = A-weighted decibel(s)

Section 8.80.250 of the Long Beach Municipal Code exempts emergencies and states that noise limits and standards shall not apply to the emission of sound for the purpose of alerting persons to the existence of an emergency; or the emission of sound in the performance of emergency work.

4.6.5 Methodology

Evaluation of noise and vibration impacts associated with the proposed project includes the following:

- Determination of the short-term construction noise and vibration impacts.
- Determination of the long-term off-site traffic noise impacts.
- Determination of the long-term stationary noise impacts from project operations.
- Determination of the required mitigation measures to reduce short-term construction–related noise and vibration impacts and long-term stationary and mobile source noise impacts.

The evaluation of noise and vibration impacts was prepared in conformance with appropriate standards, utilizing procedures and methodologies in the City of Long Beach Noise Element, the City of Long Beach Municipal Code, and FTA criteria.

4.6.6 Thresholds of Significance

Threshold 4.6.1: Generate 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 4.6.2: Generate excessive ground-borne vibration or ground-borne noise levels; or

Threshold 4.6.3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

The Initial Study, included as Appendix A, substantiates that there would be less than significant impacts associated with Threshold 4.6.3. The nearest public use airport to the project site is Long Beach Airport, approximately 1.5 miles southeast of the project site. According to the Noise Contours map prepared for the Long Beach Airport Terminal Area Improvement Project, the project site is not within the Community Noise Equivalent Level (CNEL) contours for the Long Beach Airport. In addition, the proposed Fire Station is not considered a noise-sensitive land use. Therefore, impacts related to excessive airport noise would be less than significant and Threshold 4.6.3 will not be further addressed in the Draft EIR.

4.6.7 Project Impacts

Threshold 4.6.1: **Would the project generate 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?**

4.6.7.1 Short-Term Construction-Related Noise Impacts

Less Than Significant Impact. Short-term noise impacts would be associated with construction phases of the project including Mobilization, Demolition, Grading & Undergrounding of Utilities, Substructure/Superstructure, Paving & Off-site work, and Architectural Coating & Landscaping.

Two types of short-term noise impacts could occur during construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the site. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance (passing trucks at 50 ft would generate up to a maximum of 84 dBA), the effect on longer-term (hourly or daily) ambient noise levels would be small when compared to existing average daily traffic (ADT) volumes. Because construction-related vehicle trips

would not approach the existing daily traffic volumes, traffic noise would increase by less than 3 dBA. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term, construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant. No mitigation is required.

The second type of short-term noise impact is related to noise generated during site preparation, grading, building construction, architectural coating, and paving on the project site. Construction is undertaken in discrete steps, each of which has its own mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise generated on the project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 4.6.F lists the maximum noise levels recommended for noise impact assessments for typical construction equipment based on a distance of 50 ft between the equipment and a noise receptor. Typical operating cycles for these types of construction equipment may involve 1 to 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings.

Table 4.6.F: Typical Maximum Construction Equipment Noise Levels (L_{max})

Type of Equipment	Acoustical Usage Factor	Suggested Maximum Sound Levels for Analysis (dBA L_{max} at 50 ft)
Air Compressor	40	80
Backhoe	40	80
Cement Mixer	50	80
Concrete/Industrial Saw	20	90
Crane	16	85
Excavator	40	85
Forklift	40	85
Generator	50	82
Grader	40	85
Loader	40	80
Pile Driver	20	101
Paver	50	85
Roller	20	85
Rubber Tire Dozer	40	85
Scraper	40	85
Tractor	40	84
Truck	40	84
Welder	40	73

Source: *Highway Construction Noise Handbook* (FHWA 2006).
dBA = A-weighted decibel(s)
FHWA = Federal Highway Administration.
ft = foot/feet
L_{max} = maximum instantaneous noise level

In addition to the reference maximum noise level, the usage factor provided in Table 4.6.F is utilized to calculate the hourly noise level impact for each piece of equipment based on the following equation:

$$L_{eq}(equip) = E.L. + 10\log(U.F.) - 20\log\left(\frac{D}{50}\right)$$

where: $L_{eq}(equip)$ = L_{eq} at a receiver resulting from the operation of a single piece of equipment over a specified time period

E.L. = noise emission level of the particular piece of equipment at a reference distance of 50 ft

U.F. = usage factor that accounts for the fraction of time that the equipment is in use over the specified period of time

D = distance from the receiver to the piece of equipment

Each piece of construction equipment operates as an individual point source. Utilizing the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Leq\ (composite) = 10 * \log_{10}\left(\sum_{1}^{n} 10^{\frac{Ln}{10}}\right)$$

Once composite noise levels are calculated, reference noise levels can then be adjusted for distance using the following equation:

$$Leq\ (at\ distance\ X) = Leq\ (at\ 50\ feet) - 20 * \log_{10}\left(\frac{X}{50}\right)$$

In general, this equation shows that doubling the distance would decrease noise levels by 6 dBA, while halving the distance would increase noise levels by 6 dBA.

Using information from the assumptions applied in the CalEEMod emissions modeling for the proposed project, the following list of equipment is expected to be utilized:

- Air compressors
- Backhoes
- Cement and mortar mixers
- Concrete saws
- Crane
- Grader
- Loaders
- Paver
- Roller
- Rubber-tire dozers
- Tractors

Based on the information in Table 4.6.F, the maximum noise level generated by the three loudest pieces of equipment, the crane, grader, and concrete saw were calculated. As shown in Appendix F, the combination of this equipment, taking into account the usage factor of each piece of equipment, would result in a combined noise level of 86 dBA L_{eq} at a distance of 50 ft, which represents a reference distance from project construction equipment at a calculation point for analysis purposes.

Construction noise levels will fluctuate throughout the construction period as equipment moves between the various areas on the project site. In order to assess the specific noise levels at the surrounding sensitive receptors, the average noise level experienced during construction was assessed based on the average distance of activities to the nearest surrounding receptor which would be 75 ft from the center of construction activity to the property line of the existing single-family homes to the southwest and northwest. At this distance, construction noise levels would be 82 dBA L_{eq}.

Although the project construction noise would be higher than the ambient noise in the project vicinity, it would cease to occur once the project construction is completed. The proposed project would comply with the requirements of the City of Long Beach Noise Ordinance, which states that construction activities shall only occur between the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday and federal holidays; or between 9:00 a.m. to 6:00 p.m. on Saturdays. Construction shall not occur on Sundays. Additionally, construction noise levels on average are expected to be below the FTA's recommended 90 dBA L_{eq} standard. Compliance with the City's Noise Ordinance would ensure that construction noise does not disturb residents during typical sleeping hours or during hours when ambient noise levels are likely to be lower (i.e., at night). In addition, the proposed project would implement several best practices for reducing construction noise, including, but not limited to, maximizing the distance between noise sources and sensitive receptors during construction activities, equipping construction equipment with properly operating and maintained noise mufflers, and establishing a noise disturbance coordinator for the proposed project. These best practices are included in Compliance Measure NOI-1, provided below. In conclusion, construction noise would be reduced to a less than significant level with compliance with the City's Municipal Code allowable construction hours, and incorporation of Compliance Measure NOI-1. No mitigation is required.

4.6.7.2 Long-Term Stationary-Source Noise Impacts

Less Than Significant with Mitigation Incorporated. The proposed project would include heating, ventilation, and air conditioning (HVAC) equipment. The proposed project also includes an emergency generator for the fire station; however, it would be located within the building for sound attenuation and is not expected to generate any noise to surrounding uses.

Primary HVAC equipment would be located on the rooftop of fire station and would be shielded by a mechanical screen. The equipment would be located approximately 70 ft to the east of the nearest sensitive receptor. Based on a 6 dBA reduction per doubling of distance, the unmitigated noise level would be reduced by 23 dBA L_{eq} using a 5 ft reference distance. Additionally, the proposed mechanical screenwall surrounding the rooftop equipment would provide a minimum of 7 dBA of noise reduction.

In order to avoid a significant impact, noise levels generated by HVAC equipment should be 45 dBA or less at the sensitive receptor. Taking into account the distance and noise barrier reduction, the baseline noise level of the HVAC equipment should be 75 dBA or less (45 dBA + 7 dBA +23 dBA = 75 dBA) when measured at a distance of 5 ft. Research of several manufacturers' (e.g., Trane) technical data revealed that that there are residential air conditioners with noise levels with an approximate range from 42.3 to 60.3 dBA L_{eq} when measured at a distance of 5 ft. Should the project install HVAC equipment that when combining 4 units as proposed has a noise level rating of 75 dBA or higher when measured at 5 ft without adequate noise shielding, a potentially significant impact would occur. A group of four (4) HVAC units combining to 75 dBA L_{eq} would indicate that each unit would have a level of 70 dBA L_{eq} based on logarithmic addition.

Potential impacts can therefore be addressed through Mitigation Measure NOI-1, as detailed below, which requires the selection of HVAC equipment that has a combined noise level rating of 75 dBA or four (4) individual units that are each 70 dBA or less when measured at 5 ft, to reduce potential noise to levels consistent with City regulations.

With implementation of Mitigation Measure NOI-1, the noise level impacts from the proposed HVAC systems would be reduced to less than the existing quietest nighttime noise levels and, therefore, would be reduced to a less than significant level.

Another source of noise the proposed project would generate is related to sirens when responding to emergency calls. Due to the lack of existing emergency operations at the site, residents or other sensitive-noise receptors in the immediate vicinity of the proposed project may experience periodic exposure to high noise levels due to sirens that they are not unaccustomed to. However, it should be noted that the proposed project involves the re-establishment of a fire station approximately 900 ft north of the previous location of Fire Station No. 9, which served the community for more than 80 years prior to its closure in 2019. Therefore, many long-term residents in the general vicinity of the project site have already been exposed to the noise associated with fire apparatus sirens. Typically, there is concern related to the idea that a fire station could respond to many emergencies, with multiple emergency vehicles leaving the site daily. In addition, emergency sirens are intentionally loud and such loud noise could disrupt quiet residential neighborhoods. A typical siren emits approximately 100 dB at 100 ft. It is likely that sirens would not be sounded until the truck reaches Long Beach Boulevard and during nighttime hours, efforts would be made to minimize siren sounding before leaving the station driveway. At a distance of 125 ft from Long Beach Boulevard, the closest residences would experience noise levels of up to 98 dBA L_{max}. Because emergency vehicle response is by nature rapid, the duration of exposure to these peak noise levels is estimated to last for a maximum of ten seconds as emergency vehicles pause at the driveway exit, engage the siren and turn onto the roadway and accelerate rapidly away from the fire station. The typical practice for emergency siren use is to use sirens to break traffic at intersections or warn drivers of the emergency vehicle approach when traffic is congested. Other homes and residents along routes used for emergency access would also be exposed to such noise levels, although the magnitude and frequency of this exposure would vary by distance from the road and proximity to the project site. It should be noted that the City's Municipal Code Section 8.80.250 states that *"the emission of sound for the purpose of alerting persons to the existence of an emergency; or the emission of sound in the performance of emergency work"* is exempt from the provisions of Chapter 8.80. Due to the short-

term nature of these noise increases, and because the City's Municipal Code Section 8.80.250 exempts emergency operations, this impact would be considered less than significant.

4.6.7.3 Long-Term Traffic Noise Impacts: Less than Significant Impact

In order to assess the potential traffic impacts related to the proposed project, this discussion relies on information presented in the Section 4.7, Transportation. Based on the analysis results, and accounting for the removal of the existing onsite uses, it was determined that a net additional 42 ADT would be generated by the proposed project on East Randolph Place west of Long Beach Boulevard. The existing ADT along Randolph Place is approximately 370. The following equation was used to determine potential impacts of the project:

$$\text{Change in CNEL} = 10 \log_{10} [V_{e+p}/V_{existing}]$$

Where: $V_{existing}$ = the existing daily volume
V_{e+p} = existing daily volumes plus project
Change in CNEL = the increase in noise level due to the project

The results of the calculations show that an increase of approximately 0.5 dBA CNEL is expected along Randolph Place. A noise level increase of less than 1 dBA would not be perceptible to the human ear. Similarly, the proposed project would have an increase of 29 ADT on Long Beach Boulevard which has an existing volume of 24,222 resulting in an increase less than 0.01 dBA CNEL. Although fire apparatus may generate a slightly louder noise level than a standard vehicle engine, there would be no audible difference in noise impacts between the two vehicle types when considered against the existing traffic volumes on Long Beach Boulevard.

The results indicate that the increase in noise associated with project-related traffic would be very small, ranging from 0.0 to 0.5 dBA along the segments analyzed. These noise level increases are not perceptible by the human ear; therefore, off-site traffic noise impacts would be less than significant. No mitigation is required.

Threshold 4.6.2: Would the project generate excessive ground-borne vibration or ground-borne noise levels?

Less Than Significant with Mitigation Incorporated. Ground-borne noise and vibration from construction activity would be mostly low to moderate. While there is currently limited information regarding vibration source levels, to provide a comparison of vibration levels expected for a project of this size, a small bulldozer and loaded truck, as shown in Table 4.6.G, would generate approximately 0.003 in/sec in PPV and 0.076 in/sec in PPV, respectively, of ground-borne vibration when measured at 25 ft. Table 4.6.G further shows the PPV values from other construction vibration sources at 25 ft from construction vibration sources for comparison purposes.

Table 4.6.G: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	**0.003**	**58**

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.

[2] Equipment shown in **bold** is expected to be used on site.

µin/sec = micro-inches per second
ft = foot/feet
FTA = Federal Transit Administration
inch/sec = inches per second
LV = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur at the buildings. The formula for vibration transmission is provided below:

$$L_vdB\ (D) = L_vdB\ (25\ feet) - 30\ Log\ (D/25)$$

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

As shown in Table 4.13.C, vibration levels exceeding 0.2 in/sec in PPV could result in building damage to structures constructed of non-engineered timber and masonry buildings. The closest receptor to the proposed construction activities is the existing single-family residence at 255 East Randolph Place, which is located 10 ft west of the project site's property line. This is considered the closest distance that heavy construction equipment could be from surrounding structures.

Utilizing the equations above, it is expected that vibration levels generated by dump trucks and other large equipment that would be as close as 5 ft from the project site's property line would approach 0.133 in/sec in PPV, resulting in a less than significant impact. It is expected that construction activities utilizing heavy equipment would generate vibration levels greater than 0.2 in/sec in PPV when operating within 5 ft of the property line. At these close distances, construction-related vibration could be potentially significant. Mitigation Measure NOI-2, which requires the construction contractor to implement several measures, including developing a vibration monitoring and construction contingency plan to ensure that damage does not occur at surrounding structures.

As shown above, loaded trucks and other similar equipment used for a project this size would generate levels approaching to 99 VdB of ground borne vibration when construction occurs within 10 ft of the residences to the west. As with any type of construction, vibration levels during any phase may at times be perceptible. However, construction phases that have the highest potential of producing vibration would be intermittent and would only occur for short periods of time for any individual project site. By use of best practices, such as scheduling construction activities with the highest potential to produce perceptible vibration to hours with the least potential to affect nearby properties and the incorporation of Mitigation Measure NOI-2, perceptible vibration can be kept to a minimum and as such would result in a less than significant impact with respect to perception.

The project operations would not generate vibration. In addition, vibration levels generated from project-related traffic on the adjacent roadways would be unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation. Therefore, no vibration impacts from project-related operations would occur, and no vibration reduction measures are required.

4.6.8 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would result in less than significant impacts with the exception of potential noise impacts related to rooftop HVAC equipment operations and vibration damage potential when heavy equipment operates during construction near the western property line.

While ambient noise would be elevated during construction, Compliance Measure NOI-1 identifies standard practices and requirements that are applicable to the proposed project. These requirements are considered to be mandatory compliance measures; therefore, they are not mitigation measures.

4.6.9 Compliance and Mitigation Measures

4.6.9.1 Compliance Measures

In addition to compliance with the construction hours specified in the City's Municipal Code, the following Compliance Measure NOI-1 would reduce construction noise to the extent feasible and reasonable.

Compliance Measure NOI-1 **Construction Noise and Vibration.** Prior to issuance of building permits, the City of Long Beach (City) Director of Community Development Department, or designee, shall verify that grading and construction plans include the following requirements:

- Ensure that the greatest distance between noise sources and sensitive receptors during construction activities has been achieved.
- Construction equipment, fixed or mobile, shall be equipped with properly operating and maintained noise mufflers consistent with manufacturers' standards.

- Construction staging areas shall be located away from off-site sensitive uses during the later phases of project development.
- The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site whenever feasible.
- The construction contractor shall use on-site electrical sources to power equipment rather than diesel generators where feasible.
- All residential units located within 300 feet (ft) of the construction site shall be sent a notice regarding the construction schedule. A sign, legible at a distance of 50 ft, shall also be posted at the construction site. All notices and the signs shall indicate the dates and duration of construction activities, as well as provide a telephone number for the "noise disturbance coordinator."
- A "noise disturbance coordinator" shall be established. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures to reduce noise levels. All notices that are sent to residential units within 300 ft of the construction site and all signs posted at the construction site shall list the telephone number for the disturbance coordinator.

4.6.9.2 Mitigation Measures

The following mitigation measures are required to reduce long-term stationary source noise and short-term construction vibration impacts:

Mitigation Measure NOI-1 **HVAC Equipment.** Prior to issuance of construction permits, the City of Long Beach (City) Director of Community Development, or designee, shall verify that that the approved plans indicate that mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC]) shall have a combined sound rating of less than 76 A-weighted decibels (dBA) when measured at 5 feet (ft) to assure compliance with the City's Noise Ordinance.

Mitigation Measure NOI-2 **Construction Vibration Damage.** Due to the close proximity to surrounding structures, the construction contractor shall implement the following mitigation measures during project construction

activities to ensure that damage does not occur at surrounding structures:

- Identify structures that are located within 12 ft of heavy construction activities and that have the potential to be affected by ground-borne vibration. This task shall be conducted by a qualified structural engineer as approved by the City's Director of Community Development or designee.

- Develop a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted; set up a vibration monitoring schedule; define structure-specific vibration limits; and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies would be identified for when vibration levels approached the limits.

- At a minimum, monitor vibration during initial demolition activities. Monitoring results may indicate the need for more or less intensive measurements.

- When vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures.

- Conduct post-survey on structures where either monitoring has indicated high levels or complaints of damage have been made.

4.6.10 Level of Significance after Mitigation

With the incorporation of Mitigation Measures NOI-1 and NOI-2 presented above, potential significant noise impacts related to HVAC equipment operational noise and construction vibration damage would be reduced to less than significant. All other noise or vibration impacts would remain less than significant.

4.6.11 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for noise and vibration. The cumulative area for noise and vibration impacts is based on projects occurring within close proximity of the project site which could contribute to the cumulative noise conditions.

Cumulative growth within the City could result in temporary or periodic increases in ambient noise levels at development sites throughout the City. However, construction-related noise would be temporary and would no longer occur once construction of individual future projects is completed.

In addition, future construction activities would be subject to compliance with the City's Noise Ordinance to ensure that noise impacts from construction sources are reduced. Therefore, the proposed project would not substantially contribute to temporary cumulative construction noise and vibration impacts.

Cumulative operational noise impacts would consist of the combined operational noise of the proposed project in conjunction with planned projects in the vicinity. Operation of the fire station would involve HVAC equipment operations and intermittent siren use, which could be disturbing to nearby residents and businesses. Because the City's Municipal Code Section 8.80.250 exempts emergency operations, and because the proposed fire station is a replacement for the temporary fire station already operating in the area, operational noise impacts are not considered cumulatively significant. Therefore, the proposed project would not be considered to have a cumulatively considerable contribution to the total noise environment in the City.

Therefore, noise and vibration impacts would be considered less than cumulative significant, and no mitigation is required.

4.7 TRANSPORTATION

This section describes the existing transportation and circulation conditions in the vicinity of the project site in the City of Long Beach, California, and addresses the potential impacts of Fire Station No. 9 (proposed project) in terms of intersection levels of service (LOS), safety, pedestrian, bicycle, and transit facilities in the project area. The information in this section is based on supporting transportation documentation including turn movement counts, *Highway Capacity Manual* (HCM) 6th Edition (TRB 2017) worksheets, and trip generation surveys provided in Appendix G.

4.7.1 Scoping Process

The City of Long Beach (City) received 5 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix B of this Draft Environmental Impact Report (EIR). Three comment letters included comments related to transportation.

The letter from David and Kathy Walker, received on February 19, 2022, suggested that the proposed stoplight be operational for cars exiting Randolph Place to go north or south on Long Beach Boulevard.

The letter from Stephanie Booth, received on February 28, 2022, expressed concern that the project would increase the pre-existing congestion along Long Beach Boulevard and could pose a safety concern to pedestrians and drivers.

The letter from the California Department of Transportation (Caltrans), received on March 21, 2022, advised that vehicle miles traveled (VMT) analysis should be prepared to evaluate the potential for impacts in the immediate vicinity of the project. The letter advised that any work completed on or near Caltrans' right-of-way may require an encroachment permit, which would require additional review and may be subject to additional requirements. Furthermore, if potential safety impacts are identified Caltrans may recommend safety impact mitigation. Any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State Highways will need a Caltrans transportation permit. Caltrans recommends that the Project limit construction traffic to off-peak periods to minimize the potential impact on State facilities.

4.7.2 Existing Environmental Setting

4.7.2.1 Study Area

Study Area. The study area includes the following signalized and unsignalized intersections:

1. Long Beach Boulevard/San Antonio Drive (signalized)
2. Long Beach Boulevard/Carson Street (signalized)
3. Long Beach Boulevard/Randolph Place (unsignalized)
4. Long Beach Boulevard/Roosevelt Road (signalized)

4.7.2.2 Existing Roadway Network

The following describes key roadways in the vicinity of the project.

- **Long Beach Boulevard** is a north-south, four-lane roadway with a two-way-left-turn lane at the center of the roadway, located east of the project site. According to the City's Mobility Element, Long Beach Boulevard is classified as a Boulevard. The posted speed limit is 35 miles per hour (mph). Sidewalks are provided on both sides of the street. There are no bike lanes along this roadway in the project's vicinity. On-street parking (2-hour parking with a permit required) is provided along this roadway.

- **Randolph Place** is an east-west, two lane roadway bordering the southern boundary of the project site. The speed limit is 25 mph. Sidewalks are provided on both sides of the street. On-street parking is provided along this roadway.

- **San Antonio Drive** is an east-west, two-to-four-lane roadway north of the project site. According to the City's Mobility Element, San Antonio Drive is classified as a Minor Avenue east of Long Beach Boulevard and a Local Street west of Long Beach Boulevard. The posted speed limit is 35 mph east of Long Beach Boulevard and 25 mph west of Long Beach Boulevard. Sidewalks are provided on both sides of the street. Bike lanes are provided on both sides of the street east of Long Beach Boulevard, and bike routes are provided on both sides of the street west of Long Beach Boulevard. On-street parking is provided in select locations.

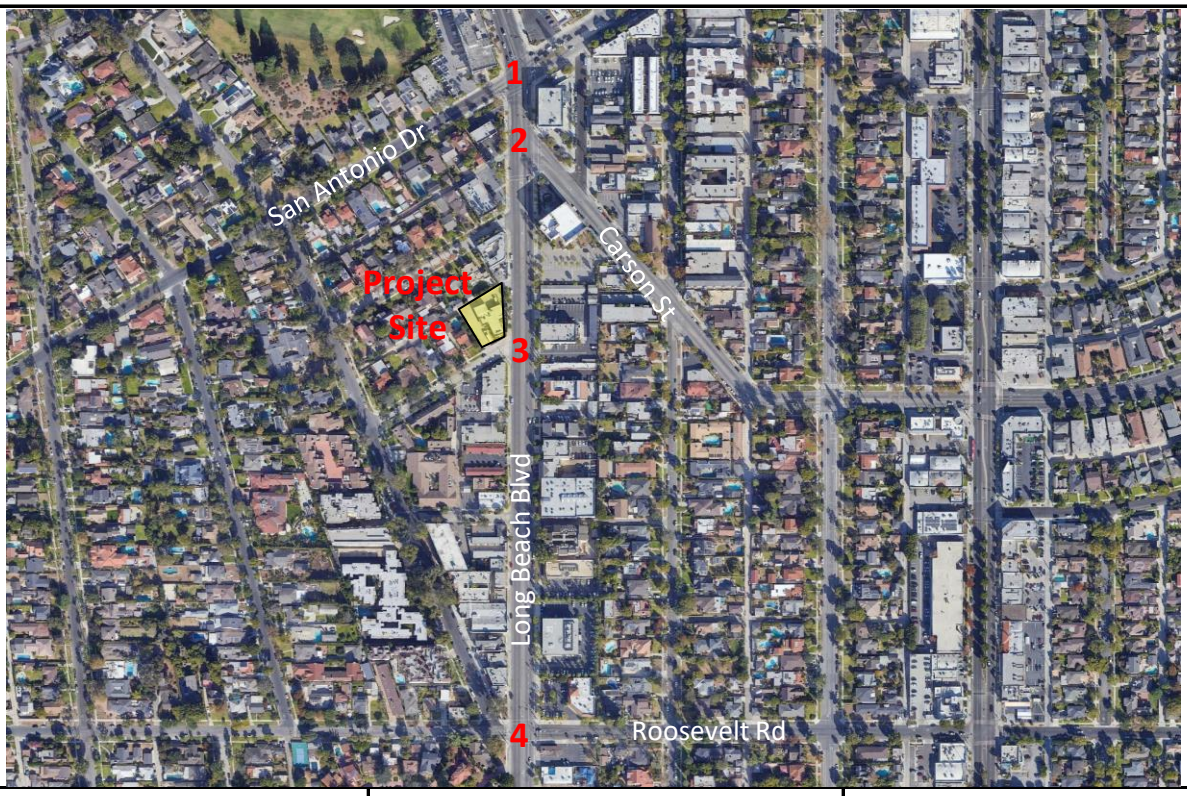
- **Carson Street** is an east-west two-lane roadway north of the project site. According to the City's Mobility Element, Carson Street is classified as a Local Street and a Major Avenue east of Long Beach Boulevard. The posted speed limit is 30 mph. Sidewalks and bike lanes are provided on both sides of the street. On-street parking is provided along this roadway.

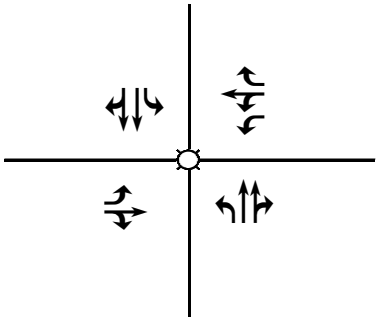
- **Roosevelt Road** is an east-west two-lane roadway south of the project site. According to the City's Mobility Element, Roosevelt Road is classified as a Local Street. The posted speed limit is 25 mph. Sidewalks and bike routes are provided on both sides of the street. On-street parking is provided along this roadway.

4.7.2.3 Existing Baseline Traffic Operations

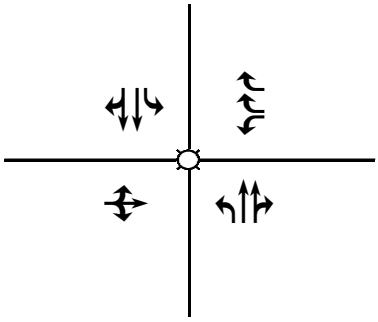
Existing peak-hour intersection turning-movement volumes were collected by an independent data collection company (Counts Unlimited, Inc.) on a typical weekday (November 4, 2021) during peak commute hours (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.). Figure 4.7-1 illustrates the existing intersection geometrics, and Figure 4.7-2 shows the existing peak-hour volumes at the study area intersections. Refer to the intersection turn movement counts in Appendix G.

Table 4.7.A summarizes the LOS for the study area intersections in the existing condition. As shown in this table, all the study area intersections are currently operating at satisfactory LOS D or better. Refer to the existing HCM worksheets in Appendix G.

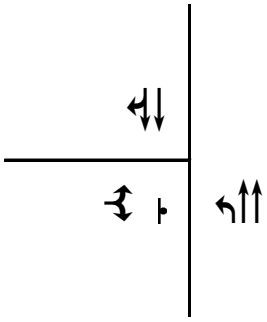




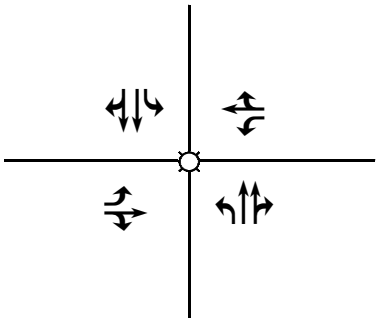
1 Long Beach Boulevard/San Antonio Drive



2 Long Beach Boulevard/Carson Street



3 Long Beach Boulevard/Randolph Place



4 Long Beach Boulevard/Roosevelt Road

LSA

Legend
Signal
Stop Sign

FIGURE 4.7-1

Long Beach Fire Station No. 9
Existing Geometrics

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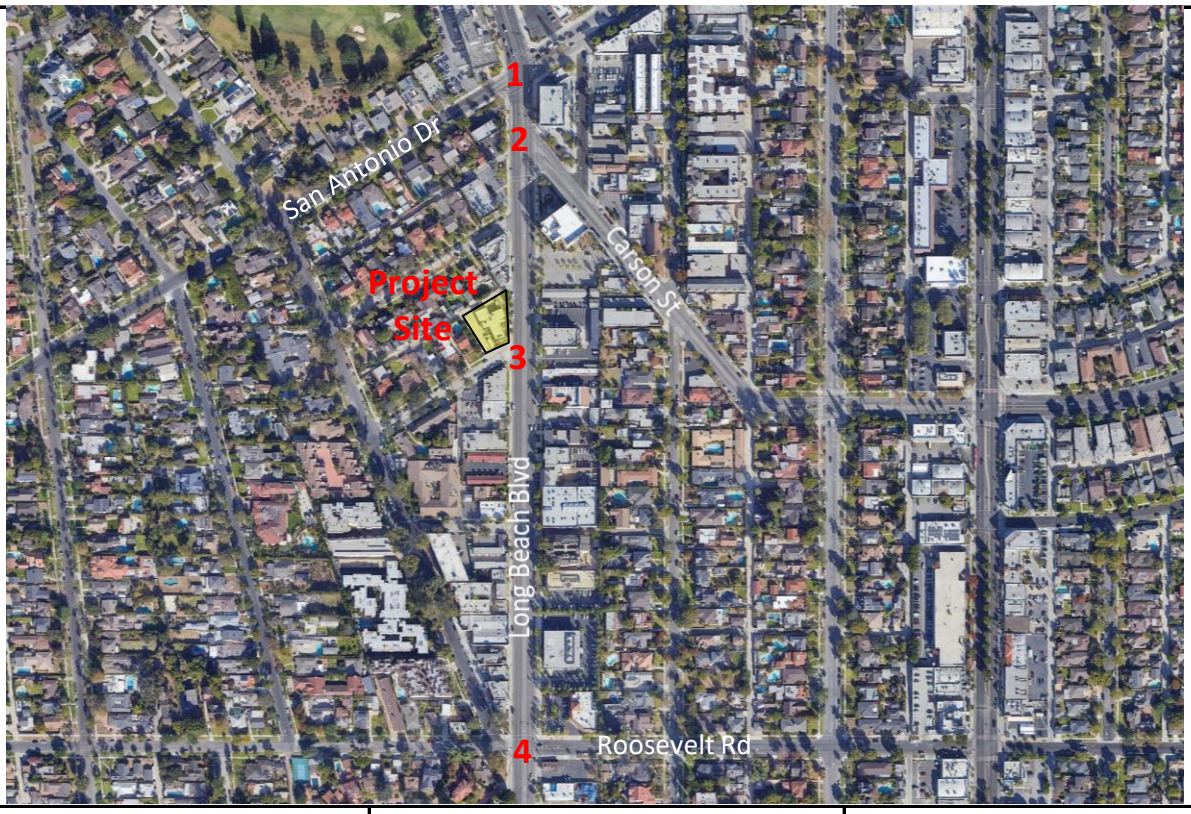
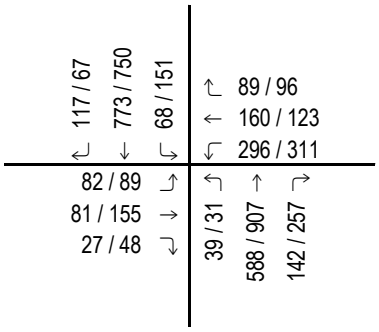
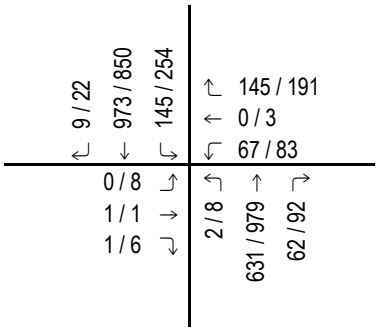
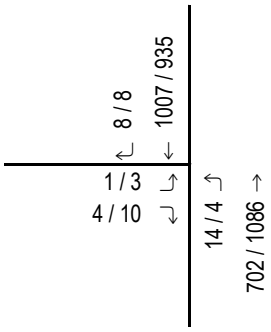




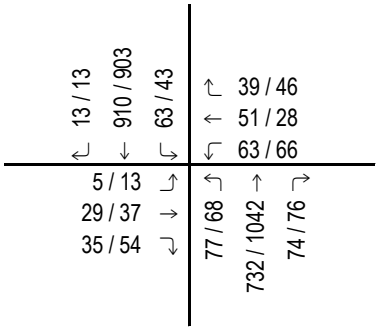
1 Long Beach Boulevard/San Antonio Drive



2 Long Beach Boulevard/Carson Street



3 Long Beach Boulevard/Randolph Place



4 Long Beach Boulevard/Roosevelt Road

LSA

XXX / YYY AM / PM Volume

FIGURE 4.7-2

Long Beach Fire Station No. 9
Existing Peak Hour Volumes

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Table 4.7.A: Existing Plus Project Intersection Level of Service Summary

Study Area No.	Intersection	Existing				Existing Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Long Beach Boulevard/San Antonio Drive	20.2	C	36.6	D	20.3	C	36.5	D
2	Long Beach Boulevard/Carson Street	7.3	A	10.1	B	7.3	A	10.1	B
3	Long Beach Boulevard/Randolph Place[1]	18.0	C	20.3	C	3.2	A	3.1	A
4	Long Beach Boulevard/Roosevelt Road	6.1	A	6.9	A	6.1	A	6.9	A

Source: Compiled by LSA (2022).
[1] A traffic signal is planned for this intersection with the development of the project. Delay is reported in seconds.
LOS = level of service

4.7.3 Regulatory Setting

4.7.3.1 Federal Regulations

There are no relevant federal traffic and circulation regulations applicable to the proposed project.

4.7.3.2 State Regulations

Congestion Management Program. In Los Angeles County, the Congestion Management Program (CMP) is the program by which County agencies have agreed to monitor and report on the status of regional roadways. In June 1990, the passage of the Proposition 111 gas tax increase required urbanized areas in the State with a population of 50,000 or more to adopt a CMP. The CMP is intended to link transportation, land use, and air quality decisions, as well as address the impacts of local growth on the regional transportation system. State legislation requires that the CMP contain a process to analyze the impacts of land use decisions by local governments on the regional transportation system. For CMP purposes, the regional transportation system is defined by the legislation as all State highways and principal arterials. The identification and analysis of impacts along with estimated mitigation costs are determined with respect to this CMP Highway System.

As the Congestion Management Agency for Los Angeles County, the Los Angeles County Metropolitan Transportation Authority (Metro) is responsible for the preparation of the CMP. The latest CMP (Metro 2010)[1] states that a significant impact would occur if intersection LOS with the project is LOS F and the proposed project causes a 0.02 or greater increase in volume-to-capacity ratio. The CMP includes 10 monitored intersections within Long Beach; however, these intersections are not included in the project study area.

Senate Bill 743. On December 28, 2018, the California Office of Administrative Law cleared the revised *State CEQA Guidelines* for use. Among the changes to the *State CEQA Guidelines* was removal of vehicle delay and LOS from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on VMT with a statewide implementation date of July 1, 2020.

[1] Los Angeles County Metropolitan Transportation Authority (Metro). 2010. Congestion Management Program. Website: http://libraryarchives.metro.net/DPGTL/programs/congestion-management-program-lacmta/2010-congestion-management-program.pdf (accessed February 3, 2022).

As discussed in the Initial Study/Notice of Preparation (IS/NOP) (provided in Appendix A of this Draft EIR), the City of Long Beach's *Traffic Impact Analysis Guidelines* (June 2020)[2] specifically address institutional/government and public services uses. This section discusses screening and thresholds for other land use types and determines that public services that support community health, safety, and welfare will be presumed to have a less than significant impact related to *State CEQA Guidelines* Section 15064.3, subdivision (b).

4.7.3.3 Local and Regional Policies and Regulations

City of Long Beach General Plan Mobility Element. In October 2013, the City approved the Mobility Element of the City's General Plan. The Mobility Element seeks to guide development and improvements to the existing circulation system. The Mobility Element establishes several goals aimed at improving the existing transportation system so that it is responsive to all travel modes.

City of Long Beach *Traffic Impact Analysis Guidelines*. The City of Long Beach's *Traffic Impact Analysis Guidelines* (2020) is the guidance document for analyzing the traffic and circulation impacts of proposed development projects in Long Beach.

4.7.4 Methodology

This assessment has been conducted in accordance with the City's *Traffic Impact Analysis Guidelines*.

4.7.4.1 Intersection Level of Service Methodology.

To determine the peak-hour operations at the study area intersections, the *Highway Capacity Manual* (HCM) 6th Edition (TRB 2017)[3] methodology was used for signalized and unsignalized intersection. At signalized intersections, the delay is reported for the overall intersection, and at two/one-way stop-controlled intersections, the delay is reported for the worst-case street approach.

Typical intersection operations by LOS grade are described below in Table 4.7.B.

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[2] City of Long Beach. 2020. *Traffic Impact Analysis Guidelines*. June. Website: https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/environmental/environmental-planning/tia-guidelines (accessed February 3, 2022).

[3] Transportation Research Board (TRB). 2017. *Highway Capacity Manual* (HCM), *Sixth Edition: A Guide for Multimodal Mobility Analysis.* Website: https://www.trb.org/Main/Blurbs/ 175169.aspx (accessed February 3, 2022).

Table 4.7.B: Level of Service Descriptions

LOS	Description
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no longstanding traffic queues.
E	Poor operation. Some longstanding vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.
F	Forced flow. Represents jammed conditions. Back-ups from locations downstream or on the cross street restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop-and-go-type traffic flow.

Source: *Highway Capacity Manual, 6th Edition* (Transportation Research Board 2017).
LOS = level of service

The relationship between LOS and the delay (in seconds) at signalized and unsignalized intersections is as follows in Table 4.7.C:

Table 4.7.C: Level of Service and Delay Relationship

LOS	Signalized Intersection Delay per Vehicle (seconds)	Unsignalized Intersections Delay per Vehicle (seconds)
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: *Highway Capacity Manual, 6th Edition* (Transportation Research Board 2017).
LOS = level of service

The City considers LOS D as the upper limit of satisfactory operations for intersections. Based on the City's *Traffic Impact Analysis Guidelines*, a deficiency requires roadway improvement where project traffic causes a signalized intersection to deteriorate from LOS D to LOS E or F, or if a signalized intersection operates at LOS E or F and the project increases the average control delay at the intersection by 2.5 seconds or more. At unsignalized intersections, a deficiency requires roadway improvement if under project conditions, the intersection operates at LOS E or F, or if the intersection meets the peak-hour traffic signal warrant after the addition of the project traffic.

4.7.5 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact with respect to transportation if it would:

Threshold 4.7.1: Conflict with program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;

Threshold 4.7.2: Conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b);

Threshold 4.7.3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

Threshold 4.7.4: Result in inadequate emergency access.

The IS/NOP (Appendix A) determined that the proposed project would result in less than significant impacts related to Threshold 4.7.2. Section 15064.3 of the *State CEQA Guidelines* codifies that project-related transportation impacts are typically best measured by evaluating the project's vehicle miles traveled (VMT). The City of Long Beach *Traffic Impact Analysis Guidelines* (June 2020) specifically discusses institutional/government and public services uses in Section 2.2.4 of the guidelines. This section discusses screening and thresholds for other land use types and determines that public services that support community health, safety, and welfare will be presumed to have a less than significant impact related to *State CEQA Guidelines* Section 15064.3, subdivision (b). In addition, the proposed project would replace a fire station with another fire station within the same service area. VMT generated by the proposed project is likely to be similar to VMT generated by the fire station being replaced. Therefore, the proposed project's impact related to *State CEQA Guidelines* Section 15064.3, subdivision (b) would be less than significant, and no mitigation is required. Further, the IS/NOP determined that the proposed project would result in less than significant impacts related to Threshold 4.7.3. Design of the proposed project, including the internal private roadways, ingress, egress, and other streetscape changes, is subject to review by the City's Public Works and Engineering Departments for compliance with City regulations. The IS/NOP determined that the proposed project would result in less than significant impacts related to Threshold 4.7.4 because access to/from the project site must be designed to City standards and would be subject to review by the Long Beach Fire Department and the Long Beach Police Department for compliance with fire and emergency access standards and requirements. Therefore, Thresholds 4.7.2 through 4.7.4 will not be further addressed in this section.

4.7.6 Project Impacts

Threshold 4.7.1: Would the project conflict with program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less Than Significant Impact. The project site is currently developed with an office use (Catalina Adventure Tours). Vehicular access to the existing site is currently provided from Randolph Place and the alleyway adjacent to the northern boundary of the project site.

The proposed project involves the demolition of the existing office building, and construction of a 12,780 square-foot (sf), two-story replacement fire station with three apparatus bays. Vehicular access to the proposed project site would be provided via three access points: an egress-only driveway on Randolph Place (for fire apparatus), an ingress-only driveway on the alleyway north of the project site (for fire apparatus and passenger vehicles), and an egress-only (right-out only) driveway on Long Beach Boulevard (for passenger vehicles). A traffic signal will be installed at the intersection of Long Beach Boulevard/Randolph Place as part of the development of the proposed project. In addition to the typical function of a traffic signal, the traffic signal could be activated from within the fire station to stop traffic on Long Beach Boulevard allowing fire apparatus unencumbered access onto Long Beach Boulevard. A new crosswalk across Long Beach Boulevard at the north leg of the intersection would be included with the new traffic signal. Placement of the crosswalk will require the removal of two parking spaces on the east side of Long Beach Boulevard. It should be noted that parking has been removed from consideration under CEQA. The new traffic signal could be coordinated with upstream and downstream traffic signals to preserve traffic flow along Long Beach Boulevard.

In order to assess the impact of the proposed project on the surrounding circulation system, the project trip generation, distribution, and assignment were developed. Daily and peak-hour trips for the proposed project were forecast by employing site-specific trips surveyed for an existing similar fire station located at 2019 East Wardlow Road in Long Beach (November 30, 2021) as the original fire station at 3917 Long Beach Boulevard is not currently in operation. Traffic volume data surveyed at this location included passenger vehicle trips and the operational trips of the fire apparatus. Table 4.7.D summarizes the project trip generation. As shown in this table, the proposed fire station is forecast to generate 62 average daily trips (ADT), with 7 trips (1 inbound and 6 outbound) in the a.m. peak hour and 2 trips (2 inbound and 0 outbound) in the p.m. peak hour. Additionally, Table 4.7.D illustrates the existing site trip generation that was based on the site surveys (November 4, 2021). As shown in this table, the existing site currently generates 20 ADT and no trips in the peak hours. Therefore, the proposed project would generate a net 42 ADT, 7 trips (1 inbound and 6 outbound) in the a.m. peak hour and 2 trips (2 inbound and 0 outbound) in the p.m. peak hour. Refer to the trip generation surveys in Appendix G.

Table 4.7.D: Project Trip Generation Summary

Land Use	ADT	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Existing Trip Generation[1]							
Office (Catalina Adventure Tours)	20	0	0	0	0	0	0
Project Trip Generation[2]							
Fire Station	62	1	6	7	2	0	2
Net Trip Generation (Project - Existing)	42	1	6	7	2	0	2

Source: Compiled by LSA (2022).

Note: The a.m. peak hour is from 7:45 a.m. to 8:45 a.m., and the p.m. peak hour is from 4:30 p.m. to 5:30 p.m.

[1] Existing trip generation from the driveway counts at the existing project site at 4101 Long Beach Boulevard on November 4, 2021.

[2] Project trip generation from the driveway counts at the fire station located at 2019 Wardlow Road on November 30, 2021.

ADT = average daily trips

Based on existing traffic patterns, it was calculated that 30 percent of the project trips originate from the north and 70 percent of the project trips originate from the south along Long Beach Boulevard. Figure 4.7-3 shows the project trips distribution and assignment.

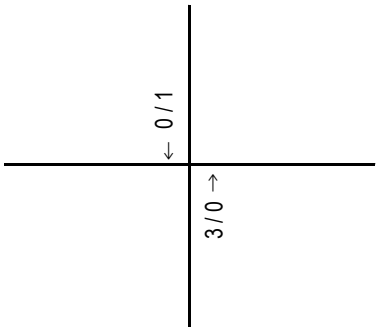
As shown previously in Table 4.7.A, with the addition of the project trips in the existing condition, all the study area intersections will continue to operate at satisfactory LOS D or better. Figure 4.7-4 illustrates the existing plus project peak-hour volumes. Refer to the existing plus project HCM worksheets in Appendix G.

Furthermore, LSA calculated the project trips that would be generated for temporary construction activities based on the estimated number of construction trucks and workers. Based on the Project Description and construction information, construction of the project will include the following eight phases (with phase durations and daily truck and worker estimates) over approximately 16 months:

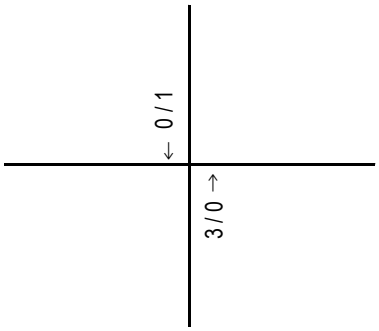
1. Mobilization (5 days): 6 workers per day
2. Demolition (25 days): 12 workers and 1 truck per day
3. Undergrounding of overhead utilities (5 days): 12 workers and 1 truck per day
4. Substructure - Install underground (u/g) utilities, foundations, rising walls, backfill, and ground floor slab (84 days): 18 workers and 4 trucks per day
5. Superstructure shell - Walls, suspended floor slab, roof, windows, façade finishes, and roof drainage (83 days): 18 workers and 4 trucks per day
6. Interior fit-out and finishes (83 days): 20 workers and 4 trucks per day
7. Site works and landscaping (30 days)
8. Off-site work - Traffic signals, alley, Randolph Place improvements, and sidewalk improvements (15 days): 22 workers per day

A passenger car equivalent (PCE) factor of 2.0 has been applied to the haul trucks. Haul truck trips would occur throughout the day, including both peak hours. To present a worst-case analysis, it is assumed that workers would arrive at the site in the a.m. peak hour and depart the site during the p.m. peak hour.

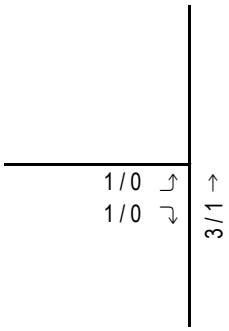
Table 4.7.E provides a summary of the trip generation for each phase of construction. As shown in this table, Phase 6 (Interior fit-out and finishes) is the most intense phase of construction (i.e., the phases with the highest construction trip generation). Phase 6 is anticipated to generate 56 ADT, including 24 trips (22 inbound and 2 outbound) in the a.m. peak hour and 24 trips (2 inbound and 22 outbound) in the p.m. peak hour, in PCEs. Figure 4.7-5 illustrates the project construction traffic trip distribution and assignment.



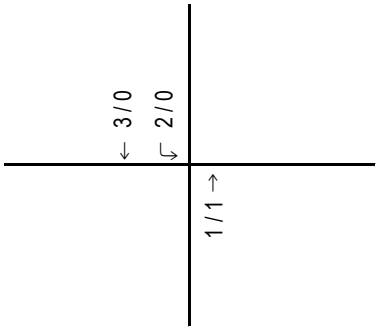
1 Long Beach Boulevard/San Antonio Drive



2 Long Beach Boulevard/Carson Street



3 Long Beach Boulevard/Randolph Place



4 Long Beach Boulevard/Roosevelt Road

LSA

XXX / YYY AM / PM Volume

FIGURE 4.7-3

Long Beach Fire Station No. 9
Project Trip Distribution and Assignment

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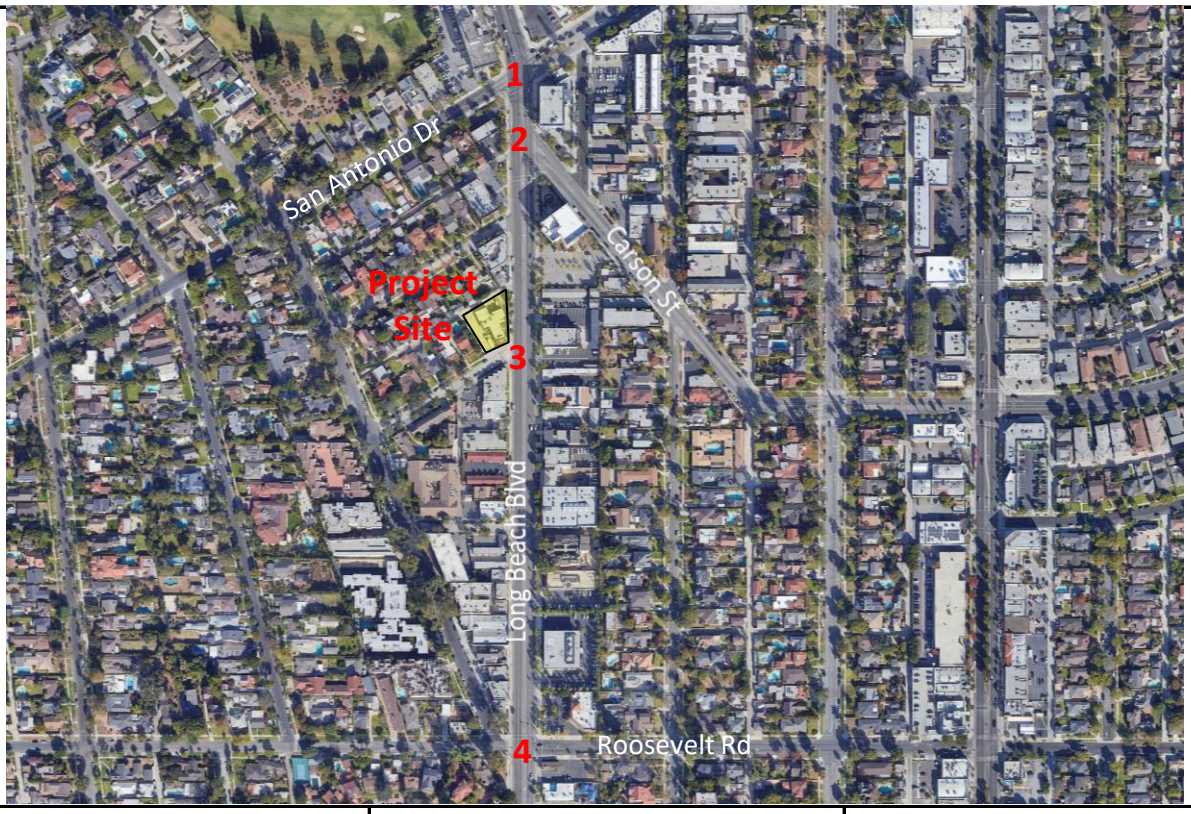

117 / 67	773 / 751	68 / 151	89 / 96	160 / 123	296 / 311			
82 / 89								
81 / 155			39 / 31	591 / 907	142 / 257			
27 / 48								

1 Long Beach Boulevard/San Antonio Drive

9 / 22	973 / 851	145 / 254	145 / 191	0 / 3	67 / 83			
0 / 8								
1 / 1			2 / 8	634 / 979	62 / 92			
1 / 6								

2 Long Beach Boulevard/Carson Street

8 / 8	1007 / 935							
2 / 3								
5 / 10			14 / 4	705 / 1087				

3 Long Beach Boulevard/Randolph Place

13 / 13	913 / 903	65 / 43	39 / 46	51 / 28	63 / 66			
5 / 13								
29 / 37			77 / 68	733 / 1043	74 / 76			
35 / 54								

4 Long Beach Boulevard/Roosevelt Road

LSA

XXX / YYY AM / PM Volume

FIGURE 4.7-4

Long Beach Fire Station No. 9
Existing Plus Project Peak Hour Volumes

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Table 4.7.E: Construction Trip Generation Summary

Phase			Vehicles			Vehicle Trip Generation							PCE Trip Generation						
						ADT	AM Peak Hour			PM Peak Hour			ADT	AM Peak Hour			PM Peak Hour		
	Description[1]	Duration	Description[2,3]	Quantity	PCE		In	Out	Total	In	Out	Total		In	Out	Total	In	Out	Total
1	Mobilization	5 Days	Workers	6	1	12	6	0	6	0	6	6	12	6	0	6	0	6	6
			Trucks	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Total			***12***	***6***	***0***	***6***	***0***	***6***	***6***	***12***	***6***	***0***	***6***	***0***	***6***	***6***
2	Demolition	25 Days	Workers	12	1	24	12	0	12	0	12	12	24	12	0	12	0	12	12
			Trucks	1	2	2	1	1	2	1	1	2	4	2	2	4	2	2	4
			Total			***26***	***13***	***1***	***14***	***1***	***13***	***14***	***28***	***14***	***2***	***16***	***2***	***14***	***16***
3	Undergrounding (u/g) of overhead utilities	5 Days	Workers	12	1	24	12	0	12	0	12	12	24	12	0	12	0	12	12
			Trucks	1	2	2	1	1	2	1	1	2	4	2	2	4	2	2	4
			Total			***26***	***13***	***1***	***14***	***1***	***13***	***14***	***28***	***14***	***2***	***16***	***2***	***14***	***16***
4	Substructure - Install u/g of utilities, foundations, rising walls, backfill	84 Days	Workers	18	1	36	18	0	18	0	18	18	36	18	0	18	0	18	18
			Trucks	4	2	8	1	1	2	1	1	2	16	2	2	4	2	2	4
			Total			***44***	***19***	***1***	***20***	***1***	***19***	***20***	***52***	***20***	***2***	***22***	***2***	***20***	***22***
5	Superstructure Shell - walls, suspend floor slab, roof, windows, façade finishes	83 Days	Workers	18	1	36	18	0	18	0	18	18	36	18	0	18	0	18	18
			Trucks	4	2	8	1	1	2	1	1	2	16	2	2	4	2	2	4
			Total			***44***	***19***	***1***	***20***	***1***	***19***	***20***	***52***	***20***	***2***	***22***	***2***	***20***	***22***
6	Interior Fit-Out & Finishes	83 Days	Workers	20	1	40	20	0	20	0	20	20	40	20	0	20	0	20	20
			Trucks	4	2	8	1	1	2	1	1	2	16	2	2	4	2	2	4
			Total			***48***	***21***	***1***	***22***	***1***	***21***	***22***	***56***	***22***	***2***	***24***	***2***	***22***	***24***
7	Site Works & Landscaping	30 Days	Workers	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Trucks	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Total			***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
8	Off-Site Work - traffic signals, alley, Randolph Place improvements, sidewalk improvements, etc.	15 Days	Workers	22	1	44	22	0	22	0	22	22	44	22	0	22	0	22	22
			Trucks	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Total			***44***	***22***	***0***	***22***	***0***	***22***	***22***	***44***	***22***	***0***	***22***	***0***	***22***	***22***

Source: Compiled by LSA (2022).
[1] The project is anticipated to occur from August 2022 to November 2023.
[2] Workers are assumed to arrive in the a.m. peak hour and depart during the p.m. peak hour.
[3] Truck trips are assumed to occur throughout the day, including the a.m. and p.m. peak hours.
ADT = average daily traffic
PCE = passenger car equivalent. A worker vehicle has a PCE of 1 and a construction truck has a PCE of 2.

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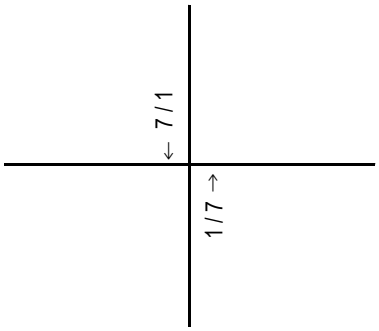
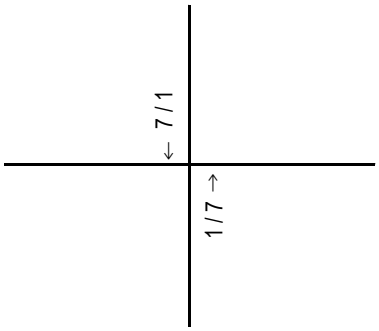
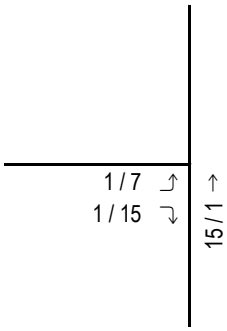


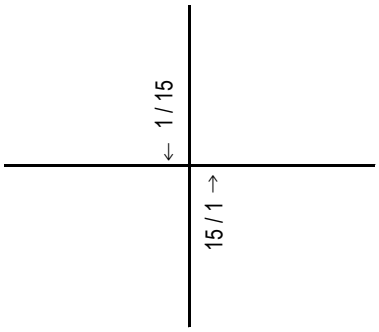
1 Long Beach Boulevard/San Antonio Drive



2 Long Beach Boulevard/Carson Street



3 Long Beach Boulevard/Randolph Place



4 Long Beach Boulevard/Roosevelt Road

LSA

FIGURE 4.7-5

XXX / YYY AM / PM Volume

Long Beach Fire Station No. 9
Construction Traffic Trip Distribution and Assignment

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Since temporary construction activities are anticipated to generate higher trips than typical operations, a LOS analysis is conducted for the construction activities to ensure the project would not result in any LOS deficiencies to the surrounding circulation system. As the new traffic signal at Long Beach Boulevard/Randolph Place would be completed in the final phase, the analysis assumes the existing unsignalized function of this intersection. Table 4.7.F summarizes the results of the existing plus construction traffic LOS analysis for the study area intersections. As shown in Table 4.7.F, all study area intersections are forecast to operate at satisfactory LOS D or better with the addition of the temporary construction trips. Figure 4.7-6 shows the existing plus construction traffic volumes. Refer to the existing plus construction traffic HCM worksheets in Appendix G.

Table 4.7.F: Existing Plus Construction Traffic Intersection LOS Summary

Study Area No.	Intersection	Existing				Existing Plus Construction Traffic			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Long Beach Boulevard/San Antonio Drive	20.2	C	36.6	D	20.3	C	37.0	D
2	Long Beach Boulevard/Carson Street	7.3	A	10.1	B	7.3	A	10.1	B
3	Long Beach Boulevard/Randolph Place	18.0	C	20.3	C	20.6	C	24.4	C
4	Long Beach Boulevard/Roosevelt Road	6.1	A	6.9	A	6.1	A	6.9	A

Source: Compiled by LSA (2022)
Note: Delay is reported in seconds.
LOS = level of service

Based on the project typical operations and temporary construction activities, the project is not anticipated to result in any LOS or operational deficiencies to the surrounding circulation system.

The City's General Plan Mobility Element (Mobility Plan 2035)[1] provides policy direction for the transportation system and links circulation strategies with those of population growth, environmental quality, and economic well-being. Mobility Plan 2035 establishes key goals, policies, programs, and requirements for achieving a transportation system that balances the needs of all road users. The project would not make any changes to the public rights-of way in the project vicinity or generate a substantial number of daily or peak-hour vehicle trips for construction or typical operations to warrant modifications to any transportation facilities (e.g., vehicular, transit, bicycle, or pedestrian). Therefore, the project would not conflict with the Mobility Plan 2035. Impacts would be considered less than significant, and no mitigation is required.

[1] City of Long Beach. 2013. Mobility Element. City of Long Beach General Plan. October. Website: https://www.longbeach.gov/globalassets/lbds/media-library/documents/orphans/mobility-element/320615_lbds_mobility_element_web (accessed February 3, 2022).

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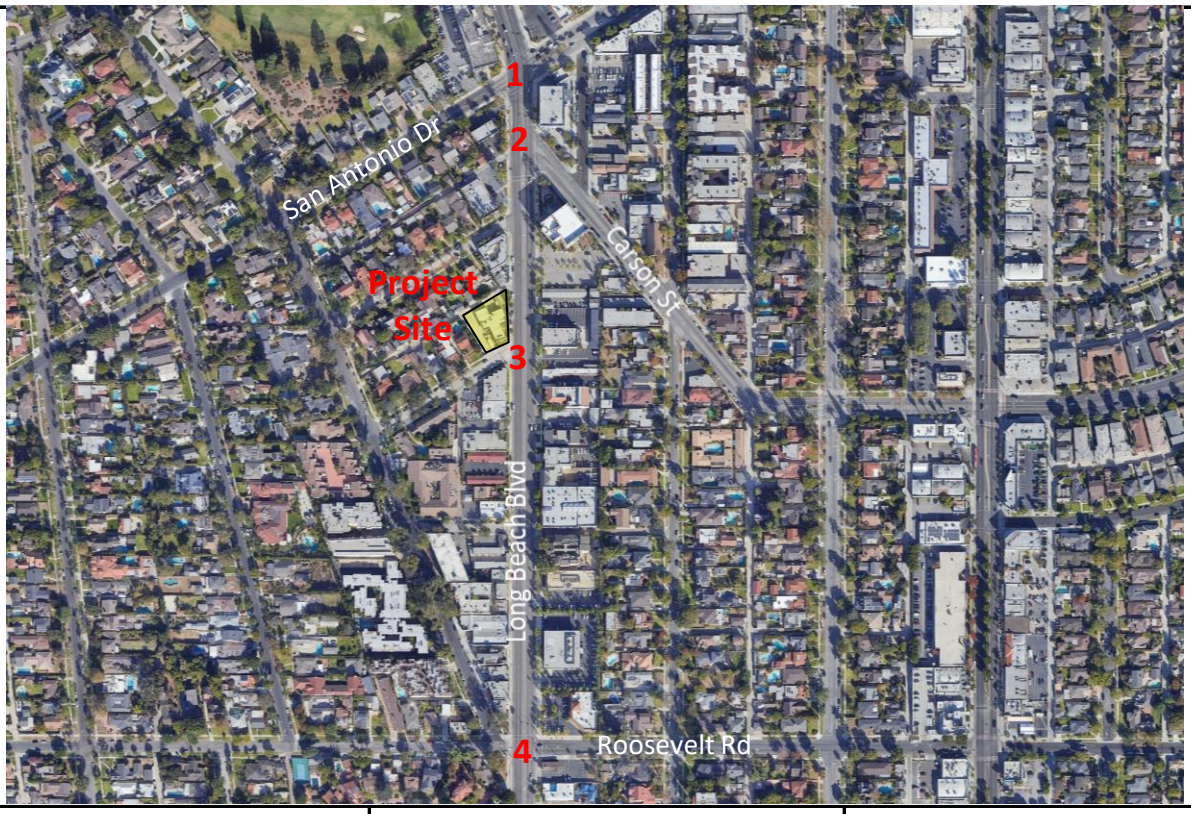
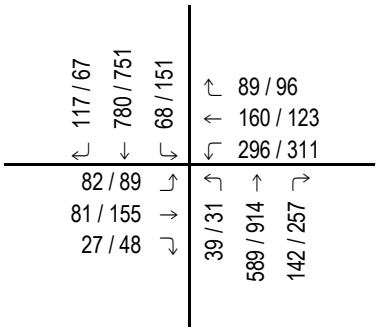
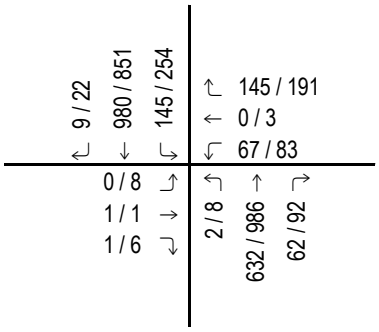
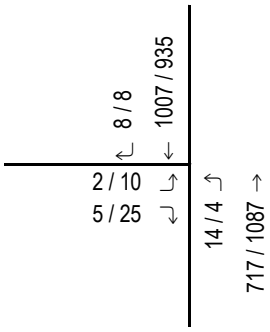




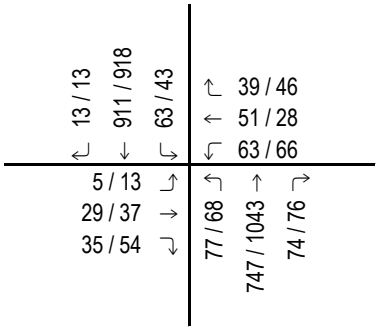
1 Long Beach Boulevard/San Antonio Drive



2 Long Beach Boulevard/Carson Street



3 Long Beach Boulevard/Randolph Place



4 Long Beach Boulevard/Roosevelt Road

LSA

FIGURE 4.7-6

XXX / YYY AM / PM Volume

Long Beach Fire Station No. 9
Existing Plus Construction Traffic Volumes

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4.7.7 Level of Significance Prior to Mitigation

The proposed project would result in less than significant impacts related to transportation, and no mitigation is required.

4.7.8 Compliance Measures and Mitigation Measures

No compliance measures are required for the proposed project.

4.7.9 Level of Significance after Mitigation

There would be no significant unavoidable adverse impacts related to transportation, and no mitigation is required.

4.7.10 Cumulative Impacts.

As defined in Section 15130 of the *State CEQA Guidelines,* cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for transportation. The cumulative impact area for transportation for the proposed project is the planning area. Although a full transportation impact study was not required for the proposed project and cumulative projects were not individually identified, several development projects are approved and/or pending within the City. Each of these projects, as well as all proposed discretionary development in the City, would be subject to its own transportation consistency analysis and would be reviewed for consistency with adopted programs, plans, ordinances, or policies addressing the circulation system. For this reason, cumulative impacts associated with inconsistency of future development with adopted programs, plans, ordinances, or policies addressing the circulation system would be less than significant. Therefore, transportation impacts associated with the proposed project would be considered less than cumulatively significant, and no mitigation would be required.

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4.8 TRIBAL CULTURAL RESOURCES

This section of the Draft Environmental Impact Report (EIR) evaluates the potential for the proposed Fire Station No. 9 project at Long Beach Boulevard (proposed project) to impact tribal cultural resources in the City of Long Beach (City). Other potential impacts to cultural resources, including historic and archaeological resources, are evaluated in Section 4.2, Cultural Resources, of this Draft EIR. The analysis in this section summarizes pertinent information from the Native American consultation process described below and findings in the *Archaeological Resources Study for the City of Long Beach Fire Station No. 9 Project in Los Angeles County, California* (Record Search Memorandum; LSA, December 2021) provided in Appendix D.

4.8.1 Scoping Process

The City of Long Beach received 5 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix B of this Draft EIR. One comment letter included comments related to Tribal Cultural Resources.

The letter from the California Native American Heritage Commission (NAHC) received on February 22, 2022, suggested that there may be cultural resources sensitive for Native Americans in the vicinity of the project site and recommended that Native American consultation be conducted with tribes that are culturally affiliated with the project site.

4.8.2 Existing Environmental Setting

The proposed project site is located at 4101 Long Beach Boulevard and is currently developed with an approximately 5,000 sf single-story office building and related parking and landscaping. The buildings currently occupied by Catalina Adventure Tours and would be demolished as part of the proposed project. Aerial photographs were used to determine that the project site was developed prior to 1953.

4.8.3 Regulatory Setting

This section includes applicable federal, State, regional, and City regulations.

4.8.3.1 Federal Regulations

Archaeological Resources Protection Act. The Archaeological Resources Protection Act was enacted in 1979 with the purpose of securing the protection of archaeological resources and sites on public lands and Native American lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals.

Native American Graves Protection and Repatriation Act. The Native American Graves Protection and Repatriation Act (NAGPRA) was passed in 1990 with the purpose of outlining a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants, and culturally affiliated Indian tribes. NAGPRA also establishes procedures for the inadvertent

discovery or planned excavation of Native American cultural items on federal or tribal lands. While these provisions do not apply to discovery or excavations on private or State lands, the collections portions of NAGPRA may apply to cultural items if they are under the control of an institution that receives federal funding. NAGPRA also makes it a criminal offense to traffic in Native American human remains without right of possession or in cultural items obtained in violation of NAGPRA.

4.8.3.2 State Regulations

Native American Heritage Commission. In 1976, the California State Government passed Assembly Bill (AB) 4239, creating the Native American Heritage Commission (NAHC). The NAHC is responsible for identifying and categorizing Native American cultural resources as well as preventing damage to designated sacred sites and associated artifacts and remains. Legislation passed in 1982 authorized the NAHC to identify a Most Likely Descendant (MLD) when Native American remains are found outside the boundaries of a designated cemetery. An MLD has the authority to make recommendations in regard to the treatment and disposition of the discovered remains.

California Public Resources Code Sections 5097.9–5097.991. California Public Resources Code (PRC) Sections 5097.9–5097.991 provide protection to Native American historical and cultural resources (including sanctified cemeteries, places of worship, religious sites, or sacred shrines) and sacred sites and gives the NAHC enforcement authority.

Specifically, California PRC Section 5097.98 outlines procedures that must be followed in the event that human remains are discovered. The County Coroner shall make a determination within two working days from the time the person responsible for the excavation, or designee, notifies the County Coroner of the discovery or recognition of the human remains. If the County Coroner identifies the remains to be of Native American origin or has reason to believe that the remains are those of Native American origin, the County Coroner must contact the California NAHC within 24 hours. The NAHC representative will then alert a Native American MLD to conduct an inspection of the site and to determine the following course of treatment and action. Additionally, *State CEQA Guidelines* Section 15064.5 sets forth a procedure if human remains are found on land outside of federal jurisdiction.

Health and Safety Code Section 7050.5. Section 7050.5 of the California Health and Safety Code protects Native American burials, remains, and associated grave artifacts in the event that they are discovered in any location other than a designated cemetery. The Health and Safety Code mandates the immediate stop of excavation in the site as well as any adjacent or overlying area where the remains or associated items are found and provides for the sensitive disposition of those remains. Should remains be discovered, the County Coroner must determine that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related 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 for the excavation, or designee, in the manner provided in PRC Section 5097.98.

The Native American Historic Resource Protection Act. The Native American Historic Resource Protection Act, or AB 52, defines guidelines for reducing conflicts between Native Americans and

development projects and activities. Projects are subject to AB 52 if a notice of preparation for an EIR is filed or a notice of intent to adopt a Negative Declaration or Mitigated Negative Declaration is filed on or after July 1, 2016. "Tribal cultural resources" are protected under CEQA and are defined as a site, feature, place, cultural landscape (must include the size and scope of landscape), sacred place, or object with a cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register of Historical Resources (California Register), or included in a local register of historical resources. At the lead agency's discretion, a resource can be treated as a tribal cultural resources if a Native American Tribe provides substantial evidence. Additionally, AB 52 allows tribes to engage in consultation with lead agencies and sets guidelines for such consultation.

Senate Bill 18. California Government Code Section 65352.3 (adopted pursuant to the requirements of Senate Bill (SB) 18) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a General or Specific Plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the NAHC. As noted in the Governor's Office of Planning and Research's Tribal Consultation Guidelines, Supplement to General Plan Guidelines (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

4.8.3.3 Regional Regulations

There are no regional regulations that are applicable to tribal cultural resources relevant to the proposed project.

4.8.3.4 Local Regulations

City of Long Beach General Plan Historic Preservation Element. The City's Historic Preservation Element (2010) of the General Plan addresses protection of the City's heritage and cultural resources. The following relevant goals related to tribal cultural resources are presented in the Historic Preservation Element. Implementation measures are included in the Historic Preservation Element but are not listed below.

> **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.
>
> **Goal 4:** Increase public awareness and appreciation of the City's history and historic, cultural, and archaeological resources.
>
> > **Policy 4.1:** The City shall participate in efforts to increase public awareness, appreciation and stewardship of the important historic and cultural resources which set Long Beach apart and make it a unique community.

Long Beach Municipal Code. Chapter 2.63, Cultural Heritage Commission of the City of Long Beach's Municipal Code, was enacted to provide recognition, preservation, protection and use of cultural resources that are necessary to the health, property, social and cultural enrichment and general welfare of the people.

4.8.4 Methodology

In order to identify tribal cultural resources on the project site and analyze potentially significant impacts associated with construction and implementation of the proposed project, the City conducted Native American consultation in accordance with AB 52 and SB 18 requirements.

On September 22, 2021, a Sacred Lands File (SLF) was requested from the NAHC for the proposed project, as was a list of potential Native American contacts for consultation under AB 52. The search was requested to determine whether there are sensitive or sacred Native American resources on or near the site that could be affected by the proposed project.

In its response to the City on October 25, 2021, the NAHC indicated that the SLF search was negative for the project area. The NAHC recommended contact and consultation with ten (10) Tribes/ Nations. The NAHC also provided a Tribal Consultation List that included the following Native American representatives to be contacted:

- Gabrieleno Band of Mission Indians - Kizh Nation, Andrew Salas, Chairperson
- Gabrieleno/Tongva San Gabriel Band of Mission Indians, Anthony Morales, Chairperson
- Gabrielino/Tongva Nation, Sandonne Goad, Chairperson
- Gabrielino Tongva Indians of California Tribal Council, Christina Conley, Tribal Consultant and Administrator
- Gabrielino Tongva Indians of California Tribal Council, Robert Dorame, Chairperson
- Gabrielino-Tongva Tribe, Charles Alvarez
- Juaneno Band of Mission Indians Acjachemen Nation – Belardes, Matias Belardes, Chairperson
- Santa Rosa Band of Cahuilla Indians, Lovina Redner, Tribal Chair
- Soboba Band of Luiseno Indians, Isaiah Vivanco, Chairperson
- Soboba Band of Luiseno Indians, Joseph Ontiveros, Cultural Resource Department

On November 8, 2021, the City sent letters for the purposes of AB 52 and SB 18 consultation to individuals on the City's AB 52 and SB 18 lists and those individuals provided by the NAHC. The letters have provided each tribe with an opportunity to request consultation with the City regarding the proposed project. Under AB 52, tribes have 30 days upon receipt of this letter to request consultation on the project. In compliance with SB 18, tribes have 90 days from the date of receipt of notification to request consultation on the proposed project. Information provided through the tribal consultation processes also inform the assessment as to whether tribal cultural resources are potentially present and the significance of any potential impacts to such resources.

Two (2) responses to the AB 52 and SB 18 letters were received from the Gabrieleno Band of Mission Indians - Kizh Nation, Andrew Salas, Chairperson, on November 9, 2021, and from the Gabrielino Tongva Indians of California Tribal Council, Christina Conley, Tribal Consultant and Administrator, on December 7, 2021. No further responses or requests for consultation under AB 52/SB 18 have been received to date.

4.8.5 Thresholds of Significance

The thresholds for tribal cultural resources impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines*. The proposed project may be deemed to have a significant impact with respect to tribal cultural resources if it would:

Threshold 4.8.1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Threshold 4.8.1(i): Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1 (k).

Threshold 4.8.1(ii): A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.8.6 Project Impacts

Threshold 4.8.1(i): **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1 (k)?**

Less Than Significant Impact. The project site is not listed or eligible for listing in the California Register, or in a local register of historical resources. An archaeological resources study was conducted for the proposed project for the project site and was documented in the Archaeological Resources Memorandum (LSA 2021b), which is provided in Appendix D of this Draft EIR. The Archaeological Resources Memorandum describes the records search and additional background research conducted for the project. The records search was conducted by an LSA Archaeologist on December 14, 2021, at the South Central Coastal Information Center (SCCIC), located at California

State University, Fullerton. The SCCIC is the official repository of cultural resources records and reports for Los Angeles County. The records search included a review of all recorded historic-period and prehistoric cultural resources within a 0.25-mile radius of the project site, as well as a review of known cultural resources surveys and excavation reports. The records search results indicate that no previous cultural resource studies have included the project site and one previously study (a literature search) has included a portion of the area within a 0.25-mile radius of the project site. No cultural resources have been previously recorded in the project site or within 0.25 mile of the project site. No resources listed in the State Office of Historic Preservation's (OHP) Built Environment Resource Directory (BERD) are within the project site.

Native American consultation was conducted by the City in compliance with AB 52 and SB 18. As part of the consultation process, a review of the SLF by the NAHC yielded negative results. Subsequently, Native American representatives were contacted by the City to determine their desire to consult on the proposed project. The Gabrielino Tongva Indians of California Tribe and Gabrieleno Band of Mission Indians requested AB 52 and SB 18 consultation, but no information regarding specific known tribal cultural resources on the project site was provided to the City.

No tribal cultural resources listed or eligible for listing in the California Register of Historical Resources (California Register) or in a local register exist within the project site, and there are no known tribal cultural resources on the project site. Despite there being no known tribal cultural resources on the project site, the potential for resources to be discovered is addressed below under Threshold 4.8.1(ii). The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource defined as a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register or in a local register of historical resources as defined in PRC Section 5020.1(k), and no mitigation is required. Refer to the Initial Study located in Appendix A and Section 4.2, Cultural Resources, for detailed information regarding the Historic Resources Elevation and the Archaeological Resources Study substantiating that no listed properties or resources exist on the project site.

Threshold 4.8.1(ii): **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Less Than Significant with Mitigation. As noted above, cultural resources record search, an SLF search through the NAHC, AB 52 Native American consultation, and SB 18 Tribal Consultation were conducted for the proposed project. The purpose of these efforts was to identify known tribal

cultural resources on or near the project site. No cultural resources were identified as part of the records search. However, consultation with Gabrielino Tongva Indians of California Tribe and Gabrieleno Band of Mission Indians resulted in the proposition of Mitigation Measure TCR-1. Mitigation Measure TCR-1 requires Native American tribal monitoring of ground-disturbing activities associated with project construction. Tribal monitors from both groups shall only be on-site when these ground-disturbing activities occur. Tribal monitoring shall continue until the conclusion of ground-disturbing activities on the project site that disturb sediments a first time. Inclusion of Mitigation Measure TCR-1 would ensure potential impacts to tribal cultural resources would be less than significant.

Although no human remains are known to be on the project site or are anticipated to be discovered during project construction, there is always a possibility of encountering unanticipated human remains. If human remains are Native American in origin, the remains may be considered a tribal cultural resource. If human remains are encountered, the City is required to adhere to Compliance Measure CUL-1, which requires compliance with the State's Health and Safety Code for the treatment of human remains and coordinate with the Native American Heritage Commission and a Most Likely Descendant if the remains are determined to be Native American. Implementation of Compliance Measure CUL-1 and Mitigation Measure TCR-1 would ensure potential impacts to tribal cultural resources would be less than significant.

Consultation occurred with the Gabrieleno Band of Mission Indians - Kizh Nation on January 20, 2022. On January 31, 2022, the Kizh Nation provided mitigation measures requesting the retention of a Native American monitor prior to commencement of ground-disturbing activities, the unanticipated discovery of human remains and associated funerary objects, and detailing procedures for burials and funerary remains.

The Gabrielino Tongva Indians of California Tribe (GTIOC) responded on March 7, 2022, with a request to meet with the City staff. On March 9, 2022, Robert Dorame, the GTIOC Tribal Chair, met with the City and provided GTIOC tribal recommendations regarding Recovery and Reburial Procedures, cultural resource monitoring recommendations, and procedures for the treatment and disposal of human remains and grave goods.

Consultation with the Gabrielino Tongva Indians of California Tribe and Gabrieleno Band of Mission Indians is ongoing.

4.8.7 Level of Significance Prior to Mitigation

Prior to mitigation, impacts to tribal cultural resources are considered less than significant; however, consultation with Gabrielino Tongva Indians of California Tribe and Gabrieleno Band of Mission Indians resulted in the proposition of Mitigation Measure TCR-1.

4.8.8 Compliance Measures and Mitigation Measures

4.8.8.1 Compliance Measures

In the unlikely event that human remains are uncovered, then the proposed project would comply with existing PRC Section 5097.98 and Section 7050.5 of the State's Health and Safety Code

requirements as described in Compliance Measure CUL-1. These requirements are considered to be mandatory compliance measures; therefore, they are not mitigation measures.

Compliance Measure CUL-1 **Human Remains.** If human remains are encountered during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to California Public Resources Code (PRC) Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.

4.8.8.2 Mitigation Measures

The following mitigation measure is required to reduce potential impacts to tribal cultural resources:

4.8.8.3 Mitigation Measures

The following mitigation measure is required to reduce potential impacts to tribal cultural resources:

Mitigation Measure TCR-1 **Tribal Consultation.** Prior to issuance of a grading permit for the project, the City of Long Beach (City) shall retain both the Gabrieleño Band of Mission Indians—Kizh Nation (Kizh Nation) and the Gabrieliño Tongva Indians of California (GTIOC) to provide Native American tribal monitoring of ground-disturbing activities. Ground-disturbing work requiring Native American tribal monitoring shall adhere to the following requirements established by the consulting Tribes:

Gabrieleño Band of Mission Indians—Kizh Nation (Kizh Nation)

1) KN-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

    A. The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any “ground-disturbing activity” for the subject project at all project locations (i.e.,

both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.

B. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to whichever is earlier: the commencement of any ground-disturbing activity or the issuance of any permit necessary to commence a ground-disturbing activity.

C. The monitor shall complete daily monitoring logs that provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Kizh Nation. Monitoring logs shall identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitoring logs shall be provided to the project applicant/lead agency upon written request to the Kizh Nation.

D. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh Nation from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh Nation to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh Nation TCRs.

E. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh Nation monitor and/or the Kizh Nation archaeologist. The Kizh Nation shall recover and retain all discovered TCRs in the form and/or manner the Kizh Nation deems appropriate, in the Kizh Nation's sole discretion, and for any purpose the Kizh Nation deems appropriate, including for educational, cultural, and/or historic purposes.

2) KN-2: Unanticipated Discovery of Human Remains and Associated Funerary Objects

A. 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 Public Resources Code Section 5097.98, are also to be treated according to this statute.

B. If Native American human remains and/or grave goods are discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain 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 they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed.

C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code Sections 5097.98(d)(1) and (2).

D. Construction activities may resume in other parts of the project site at a minimum of 200 feet away from

discovered human remains and/or burial goods, if the Kizh Nation determines in its sole discretion that resuming construction activities at that distance is acceptable and provides the project manager express consent of that determination (along with any other mitigation measures the Kizh Nation monitors and/or archaeologist deems necessary) (*State CEQA Guidelines* Section 15064.5(f)).

E. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

F. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

3) KN-3: Procedures for Burials and Funerary Remains:

A. As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Kizh Nation, 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.

B. If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created.

C. The prepared soil and cremation soils shall 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. Cremations shall either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials.

D. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains shall 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 shall be posted outside of working hours. The Kizh Nation shall 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.

E. In the event preservation in place is not possible despite good faith efforts by the project applicant/ developer and/or landowner, before ground-disturbing activities may resume on the project site, 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.

F. Each occurrence of human remains and associated funerary objects shall be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony shall be removed to a secure container on site if possible. These items shall be retained and reburied within 6 months of recovery. The site of reburial/ repatriation shall be on the project site but at a location agreed upon between the Kizh Nation and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

G. The Kizh Nation shall work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Kizh Nation, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery-related forms of documentation shall be approved in advance by the Kizh Nation. If any data recovery is performed, once complete, a final report shall be submitted to the Kizh Nation and the NAHC. The Kizh Nation does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

Gabrieliño Tongva Indians of California (GTIOC)

1) GTIOC-1: Native American Monitor

A. A qualified and certified indigenous tribal member of the Gabrielino Tongva Indians of California (GTIOC) shall provide professional Native American Monitoring required for the ground-disturbing activity on the site. Ground disturbances including but not limited to the removal of asphalt/cement/ slurry, trenching, boring, excavation, auguring, grubbing, tree removal, grading and drilling shall be monitored. The Tribal Monitor shall only be required on site when these ground-disturbing activities occur.

B. The GTIOC monitor shall be responsible for observing all mechanical and hand labor excavations to include paddle scrappers, blade machines, front-end loaders, backhoe, boring and drill operations as well as hydraulic and electric chisels. Associated work using tools such as picks and other non-electric or gasoline tools that are not regarded as mechanical shall be monitored for their soil disturbances.

C. Soils that are removed from the work site are considered culturally sensitive and are subject to inspection. These soils whether placed in a dump truck or spots piles are to be inspected. The monitor shall temporarily hold excavations until a

determination is made on the sensitivity of the of the soil. If the soils are sensitive, an archaeological monitor shall verify the find and notify the site supervisor.

D. The GTIOC monitor may make recommendations during the course of the project when a cultural area has been impacted. The GTIOC monitor shall be authorized to halt or redirect excavation activities to another area as an assessment is made. Both archaeological and GTIOC shall work together to ensure that the area is warranted as being culturally sensitive before a determination is made. Avoidance and directing an alternative route from this culturally sensitive area is highly recommended.

E. Any artifacts associated within the site that are not associated with any burials are subject to collection by the designated archaeologist for purposes of data and information vital for their final report. The GTIOC monitor does not collect artifacts for any reason. Unauthorized removal of artifacts will jeopardize sites orientation and successful data recovery. Only a qualified archaeologist shall remove artifacts for their reports. The landowner shall work with the GTIOC monitor to ensure that a proper repository is established. A final report shall be issued to the cultural consultant by the archaeological company.

F. It is the sole responsibility of the GTIOC monitor to provide the client with a written daily field report that includes photos of his/her accounting of the soil disturbances of the daily activities. This perspective of the daily activities by the GTIOC monitor shall enhance the information gathered by the field archaeologist. The daily report shall include observations the GTIOC visually observed on the project site at the beginning of each workday (i.e., weather conditions, overnight disturbances).

2) GTIOC-2: Archaeological Survey

A. If a culturally sensitive area is identified, an archaeological survey must be completed before any movement of soil (to include hand shoveling,

grading or excavation) takes place. The survey must be conducted by a qualified archaeologist who is knowledgeable and experienced in working in the Gabrielino Tongva geographical area. If an archaeologist has little or no experience in the Gabrielino Tongva territory, a qualified, experienced Gabrielino Tongva cultural consultant shall assist in the archaeological survey.

3) GTIOC-3: Treatment Plan for Human Discovery

A. If any archaeological or paleontological, or cultural deposits, are discovered, including but not limited to skeletal remains and grave related artifacts, artifacts of traditional cultural, religious, or spiritual sites, or any other artifacts relating to the use or habitation sites, all construction shall cease within at least 50 feet of the discovery and halted until the proper authorities are contacted. Authorities, to include the county corner and law enforcement, shall evaluate and make a determination and a formal review of the find. The county coroner has the legal responsibility for determining whether or not the remains are native indigenous people.

B. If it is established that the remains are of native indigenous people, the Native American Heritage Commission (NAHC) shall be contacted by the coroner under the California Health and Safety Code (Senate Bill 297, Chapter 1492, Statutes of 1982 and Section 7050.50). A Most Likely Descendant (MLD) shall be assigned by the NAHC to ensure the ancestor(s) is treated with dignity and respect (Public Resources Code Section 5097.98). A certified osteologist shall be retained to verify the human remains' authenticity and work to help remove the ancestor(s) from the site area with the discretion and advice of the MLD. The GTIOC monitor(s) assigned to the project shall assist the osteologist and archaeological monitors in the recovery process. The MLD shall determine where the ancestors shall be housed pending a final decision for the reinterment of the ancestor(s).

4) GTIOC-4: Recovery and Reburial Procedures

A. Specific methods of recovery and reburial procedures have been developed and adopted by the Gabrielino Tongva Indians of California and are required to adhere to when recovering Gabrielino Tongva remains. Conditions may arise where altering some of these guidelines shall be considered. Consultation with the MLD and the GTIOC monitor(s) assigned to the site should then be scheduled to determine other procedures that may be acceptable to the Gabrielino Tongva Nation.

Excavation:

1. Consultation between the MLD and the archaeological firm must take place before the recovery of the remains and during the process of extraction.

2. A 50-foot perimeter for each uncovered burial shall be required to safeguard further destruction until the area is examined for additional remains and associated grave goods.

3. In the event blade machines are operating in an adjacent area, a maximum of 2-inch cuts or less shall be permitted in all cultural areas.

4. If more than one area is being excavated for extraction of remains simultaneously, an additional GTIOC must be required. Each excavated burial shall be monitored exclusively.

5. Wooden tools are preferred for the process of recovery; electric chisels and other power tools should be avoided.

6. If remains are pedestaled, they shall be placed on plywood for removal. If remains cannot be pedestaled due to soil conditions, remains shall be carefully placed in cloth bags.

7. Soils adjacent to burials shall be saved for reburial in plastic containers.

8. No photography (both film and digital) or video is allowed to be taken of the remains or the site. Drawings of remains are permitted to retain the orientation of the ancestors for reinterment purposes only. Coroner photographs of the remains may not be published for any purpose.

Testing:

1. DNA testing cannot be undertaken.

2. No invasive testing which would compromise the integrity of the remains is permitted.

3. Macroscopic analysis is permitted.

4. Any associated grave goods (such as shell) may be used for dating purposes of each burial.

5. When remains are unearthed, 1-foot X 1-foot test pits will be allowed to establish the extent of the burial area when necessary.

6. All windrows within a 50-foot area must be screened (either wet or dry).

Storage:

1. Natural cotton bags and sheeting or cotton drop cloths shall be used to store remains until the time of reinterment. Deer or other native hides may be used to cover the bagged and wrapped remains until the reburial and may become the burial wrapping.

2. Bone fragments are also subject to be bagged in cotton.

3. Until the scope of the project is completed, storage of ancestors shall be done in close proximity to the location of excavation or a protected area must be provided by the landowner or archaeologist.

Reburial:

1. Efforts shall be made to keep the remains within the same location or in close proximity to the removal site as possible. It is preferable to repatriate the remains within a 0.50-mile radius of the original grave site. If it is not possible to identify a proper location within the 0.50-mile radius, a secure location will be valued over distance.

2. If the preponderance of remains is uncovered in or excavated from one area, the reinterment should be in that area.

3. The reburial site should offer the best long-term protection against any additional disturbances.

4. Each reburial requires approximately 4 feet X 5.5 feet when fully articulated and should be at a depth of 6–10 feet. The purpose of this depth is to ensure difficulty in disturbing the reburial and to allow adequate room for capping if necessary.

5. Any isolated bone fragments uncovered on site may be buried together in an individual burial pit with indigenous animal skins, seaweed, or the cotton cloth used for all bagged fragments.

6. All associated grave goods and artifacts along with soils shall be buried together with the ancestors.

7. No drawings of any other images of ancestral remains may be used for publication without consultation and the approval of the GTIOC monitors and appointed MLD for the site.

Costs:

1. The landowner(s) shall be responsible for all costs related to the proper storage and reburial of remains excavated on their property to include all burial materials as required in these procedure guidelines.

2. The landowner(s) shall be financially responsible for providing reburial plots that are acceptable by the MLD.

4.8.9 Level of Significance after Mitigation

With implementation of Mitigation Measure TCR-1, the proposed project would result in less than significant impacts with respect to tribal cultural resources.

4.8.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects. The cumulative impact area for tribal cultural resources for the proposed project is the City of Long Beach.

Potential impacts of the proposed project to unknown tribal cultural resources, when combined with the impacts of past, present, and reasonably foreseeable projects in the City of Long Beach, could contribute to a cumulatively significant impact due to the overall loss of archaeological artifacts and cultural resources unique to the region. However, each discretionary development proposal received by the City is required to undergo environmental review pursuant to CEQA. If there were any potential for significant impacts to archaeological or tribal cultural resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures for each project. When resources are assessed and/or protected as they are discovered, impacts to these resources are less than significant.

As such, implementation of Mitigation Measure TCR-1 and Compliance Measure CUL-1 would ensure that the proposed project, in conjunction with other development in the City, would not result in a significant cumulative impact to unique tribal cultural resources and previously undiscovered buried human remains.

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5.0 ALTERNATIVES

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant effects of the project and evaluate the comparative merits of the alternatives" (*State CEQA Guidelines*, Section 15126.6). This chapter identifies potential alternatives to the Fire Station No. 9 at 4101 Long Beach Boulevard (proposed project) and evaluates them as required by CEQA.

Key provisions of the *State CEQA Guidelines* on alternatives (Section 15126.6[b] through [f]) are summarized below to explain the foundation and legal requirements for the alternatives analysis in this Draft EIR:

- The discussion of alternatives shall focus on alternatives to the project that would feasibly attain most of the basic project objectives or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly (15126.6[b]).

- The specific alternative of "no project" shall also be evaluated along with its impact (15126.6[e][1]). The "no project" analysis shall discuss the existing conditions at the time the Notice of Preparation (NOP) is published and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (15126.6[e][2]).

- The range of alternatives required in an EIR is governed by the "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in such a manner as to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives are 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 (or the site is already owned by the proponent) (15126.6[f]).

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (15126.6[f][2][A]).

- If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project, which must be in close proximity to natural resources at a given location (15126.6[f][2][B]).

- An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (15126.6[f][3]).

5.2 SELECTION OF ALTERNATIVES

Section 21100 of the Public Resources Code and Section 15126.6 of the *State CEQA Guidelines* require an EIR to identify and discuss a No Project Alternative and a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the proposed project and would avoid or substantially lessen any of the significant environmental impacts. Based on the criteria listed above, the No Project Alternative is the only reasonable alternative as discussed further below.

- **Alternative 1: No Project Alternative - Current Lease Term.** This alternative would involve no changes to the existing land uses and conditions on the project site. Under this alternative, no new development on the project site is proposed, and therefore, no development would occur and the project site would remain in its current condition. The No Project Alternative (Current Lease Term) would allow for the project site to remain developed with the existing 5,000 sf office building and associated infrastructure into the foreseeable future. Under this alternative, the existing temporary Fire Station No. 9 at 2019 Wardlow Road would remain in place until the end of the existing lease term which is allocated for a maximum of three years.

- **Alternative 2: No Project Alternative - Temporary Fire Station Location Made Permanent.** This alternative would make the temporary location of Fire Station No. 9 at 2019 Wardlow Road a permanent location. This alternative would involve no changes to the existing land uses and conditions on the project site. Under this alternative, no new development on the project site is proposed, and therefore, no development would occur and the project site would remain in its current condition. This variation of the No Project Alternative would allow for the project site to remain developed with the existing 5,000 sf office building and associated infrastructure into the foreseeable future. Under this alternative, the existing temporary Fire Station No. 9 at 2019 Wardlow Road would have to undergo a lease extension or a purchase and sale agreement to make the temporary fire station permanent.

The Alternatives analysis provides the following:

- Description of the alternative;

- Environmental analysis of the potential impacts of the alternative and the significance of those impacts (per the *State CEQA Guidelines*, significant effects of an alternative shall be discussed but in less detail than those of the proposed project);

- Overview of the potential impacts of the alternative and the significance of those impacts; and

- Summary comparison of the alternative relative to the proposed project's impacts, specifically addressing whether the alternative would meet the project objectives, eliminate or reduce impacts as compared to the project, and include other comparative merit

5.3 PROPOSED PROJECT

5.3.1 Project Characteristics

As described earlier in Chapter 3.0, Project Description, the proposed project would consist of a two-story, approximately 12,780-square-foot (sf) fire station located at 4101 Long Beach Boulevard. The proposed project involves the demolition of the existing office building on-site and associated parking and landscaping. Also included in the proposed project are associated onsite and offsite infrastructure improvements necessary to facilitate pedestrian and vehicular access to and from the project site, landscaping improvements, and utility upgrades necessary to implement the proposed project. Fire Station No. 9 would be designed to adequately provide fire services to the Fire Station No. 9 service area and is a replacement for the temporary fire station serving that service area. Chapter 3.0 provides additional descriptive information regarding the proposed project and includes figures showing the site layout and proposed building elevations.

5.3.2 Project Objectives

The alternative is analyzed to determine whether it achieves the basic objectives of the proposed project. The underlying purpose of the proposed project would be to provide permanent fire department services to Fire Department Service Area 9 within the City. As stated in Chapter 3.0, the City has established the following intended specific objectives for the proposed project that would serve to aid decision makers in their review of the proposed project and its associated environmental impacts:

1. Return Fire Station No. 9 equipment and personnel to its service area in order to help meet the Long Beach Fire Department response time goal of 6 minutes and 20 seconds for structure fires and 6 minutes for Advanced Life Support.
2. Provide a fire station in compliance with applicable Building Code requirements and with National Fire Prevention Association (NFPA) standards for fire station design, including the provision of facilities for all genders.
3. Provide a new fire station with a secure apparatus bay to house a 32-foot Type 1 Fire Engine, a 22-foot Type 3 Brush Rig, a 22-foot Rescue Company Vehicle, and a 22-foot Battalion Chief Vehicle within an enclosed structure.
4. Provide a permanent structure for fire personnel that encourages efficient fire operation and adequate space for fire personnel health and well-being.
5. Provide a new fire station with a flexible layout that allows the Long Beach Fire Department to provide for current and future fire and public safety service demands for the next 50 years.
6. Provide a fire station that is complimentary with the context of the surrounding uses and structures.
7. Design a new fire station that is energy efficient and of high-quality design.

5.3.3 Project-Related Impacts

As described further in Chapter 2.0, Introduction, the proposed project would result in either no impacts or less than significant impacts related to the following topics: aesthetics, agriculture and forestry resources, biological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire.

As described in Chapter 4.0, Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation Measures, the proposed project would result in less than significant impacts related to land use, noise, and transportation. No mitigation measures would be required to reduce project-related impacts, and the proposed project would not result in any significant unavoidable impacts.

As described throughout Chapter 4.0, the proposed project would not result in significant unavoidable adverse impacts related to air quality, cultural resources, energy, greenhouse gas emissions, noise; land use and planning; transportation/traffic; and tribal cultural resources. For the purpose of this alternatives analysis, it is assumed the alternative would comply with applicable federal, State, and local regulations, policies, and ordinances. It is also assumed that all mitigation measures required for project implementation would also apply to any project alternative and that similar reductions in impacts would be achieved through such mitigation. Therefore, the following discussion focuses on the ability of the alternative to further reduce or lessen project impacts and the potential impacts of the project related to these issues.

5.4 ALTERNATIVES INITIALLY CONSIDERED BUT REJECTED FROM FURTHER CONSIDERATION

The following is a discussion of the development alternatives considered during the environmental review process and the reasons they were not selected for detailed analysis in the Alternatives section of this Draft EIR.

5.4.1 Alternative Sites Considered

CEQA requires that the discussion of alternatives focus on project alternatives or locations that are capable of avoiding or substantially lessening any significant impacts of the project. The key question and first step in the analysis is whether any of the significant impacts of the project would be avoided or substantially lessened by relocating the project. Only developments or locations that would avoid or substantially lessen any of the significant impacts of the project need be considered for inclusion in the EIR (*State CEQA Guidelines*, Section 15126.6[f][2][A]). If it is determined that no feasible alternative locations exist, the EIR must disclose the reasons for this conclusion (*State CEQA Guidelines*, Section 15126.6[f][2][B]). As stated in the *State CEQA Guidelines* (Section 15126.6[f][2]), "…The key questions and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or lessen any of the significant effects need to be considered for inclusion in the EIR."

A City review process was conducted to determine whether alternative sites were potentially viable. The analysis of alternative sites included an assessment of approximately 30 sites within Fire

Department Service Area 9 that would also be suitable for the development of the proposed project. Pursuant to *State CEQA Guidelines* (Section 15126.6[f][1]), the following factors were used to assess the feasibility of available alternative sites: suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the City could reasonably acquire, control, or otherwise have access to the alternative site. One of the sites evaluated during the City review process was the possible remediation and/or redevelopment of the previous Fire Station No. 9 location at 3917 Long Beach Boulevard. The City determined that reuse of that site was not economically viable due to the level of contamination and the redevelopment required to successfully develop a fire station that would meet the National Fire Prevention Association (NFPA) standards. Redevelopment of the previous Fire Station No. 9 location would not have accommodated the state-of-the-art design that the project site would be able to provide. Consequently, the attainment of all seven objectives included in Chapter 3.0 would not have been feasible at the former Fire Station No. 9 location.

The City of Long Beach Economic Development and Public Works Departments conducted a search for viable sites within Fire Department Service Area 9. The search included a site selection process that included the following parameters:

- Emergency response time
- Proximity to arterial streets
- Lot size, shape, and topography
- Maneuverability in and out of the site
- Multiple points of access to the site for apparatus with large turning radiuses
- Drive through apparatus bays for the fire engines
- Access to utilities and existing infrastructure
- On-site parking for staff and security
- Traffic impacts
- Zoning
- Community enhancement

To meet the operational and maneuverability needs of a 3-apparatus bay fire station, an approximate site size of 0.5 acre (21,780 sf) would be needed assuming the above factors were satisfactory. A smaller site could be accommodated and was reviewed if street access provided a drive through configuration.

The site located at 4101 Long Beach Boulevard is 16,829 sf (0.4 acre) and was able to meet the requirements above due to the site's corner configuration and alley access.

The City held a community meeting on November 9, 2020, to discuss potential sites and exterior designs for the proposed project. A second community meeting was held on December 16, 2020, to answer public comments, including those related to the site selection process.

The City has reviewed the inventory of properties that have the potential to support a similarly sized fire station. The results of the search within Fire Department Service Area 9 did not yield any properties that would be suitable in terms of size and availability. Because the primary project objective is to provide a permanent fire station within this service area, and pursuant to the CEQA feasibility factors, no alternative sites were identified as potentially feasible alternative sites. In addition, because the City does not have jurisdiction over areas outside of its boundaries and cannot impose General Plan policies and Municipal Code ordinances on such areas, no alternative planning areas outside of the City are feasible. Therefore, this alternative was rejected from further consideration and is not analyzed further in this Draft EIR.

5.4.2 Reduced Project Considered

Consideration of a reduced project alternative is not feasible as the size of the project site (0.4 acre) is considered the minimum adequate size to provide fire services to Fire Department Service Area 9. The equipment described under the Project Objectives is required to provide adequate emergency and firefighting services within the service area. It is not feasible to adopt only portions of the proposed fire station; all components are required to provide such services. In addition, because the proposed project would not result in any significant unavoidable impacts, and all potential impacts can be mitigated to a less than significant level, a reduced project alternative would not avoid or substantially lessen any potential significant impacts. Further, a reduced project alternative would be inconsistent with all Project Objectives. Therefore, reduced project alternatives were rejected from further consideration and are not analyzed further in this Draft EIR.

5.5 ALTERNATIVE 1: NO PROJECT ALTERNATIVE - CURRENT LEASE TERM

5.5.1 Description

Consistent with Section 15126.6 of the *State CEQA Guidelines*, the Alternative 1: No Project Alternative assumes the existing land uses and condition of the project site at the time the Notice of Preparation (NOP) was published (February 2022) would continue to exist without any changes. The setting of the project site at the time the NOP was published is described throughout Chapter 4.0 of this Draft EIR with respect to individual environmental issues and forms the baseline of the impact assessment of the proposed project. The Alternative 1: No Project Alternative represents the environmental conditions that would exist if no new development of any kind were to occur on the project site. The Alternative 1: No Project Alterative would allow existing conditions on the project site to remain unchanged.

While the Alternative 1: No Project Alternative would lessen or avoid impacts of the proposed project, the beneficial impacts of the proposed project—including the timely and adequate fire services provided by the City—would not occur, and none of the Project Objectives (as discussed in Chapter 3.0, Project Description) would be met. Beneficial impacts of the proposed project include providing adequate and safe fire services for the service area of Fire Station No. 9. The Alternative 1: No Project Alternative would deny the proposed project's beneficial uses of providing quality fire protection services to the neighborhoods in the City surrounding the project site. Under existing conditions, the temporary Fire Station No. 9 location at 2019 East Wardlow Road would continue to operate under its three-year lease. Under the Alternative 1: No Project Alternative - Current Lease Term, a new location would need to be found in the event that the lease at the temporary location

cannot be extended. Under existing conditions, the Fire Station No. 9 service area is receiving fire services that could be improved with the location of the proposed project. The Alternative 1: No Project Alternative would maintain current conditions in providing insufficient fire services to the proposed project service area.

5.5.2 Environmental Analysis

5.5.2.1 Air Quality

The Alternative 1: No Project Alternative would not require grading or construction and would not change or increase the intensity of the existing on-site use or increase vehicle trips to and from the project site. Therefore, no additional air pollutant emissions related to grading, construction, additional vehicle trips, and operational uses would be generated under this alternative, and no air quality impacts would occur. As compared to the proposed project, no new construction or operational emissions would occur. Therefore, although the proposed project would result in less than significant air quality impacts, the Alternative 1: No Project Alternative's impacts on air quality would be less than the air quality impacts associated with the proposed project.

5.5.2.2 Cultural Resources

The Alternative 1: No Project Alternative would not require any grading, site work, or demolition because no new development would occur on the project site. In addition, no buildings would be constructed on the project site. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource. Further, the Alternative 1: No Project Alternative would not have the potential to disrupt human remains or result in the discovery of previously unknown archaeological resources. No impacts related to cultural resources would occur under this alternative. Therefore, although the proposed project would result in less than significant impacts to cultural resources, the Alternative 1: No Project Alternative's impacts on cultural resources would be less than the proposed project as no disturbance would occur on the project site.

5.5.2.3 Energy

The Alternative 1: No Project Alternative would not require any grading or site work because no new development would occur on the project site. No new buildings would be constructed on the project site and no increased operations would occur. Therefore, this alternative would not increase energy demand on the project site over existing conditions. However, the Alternative 1: No Project Alternative would continue to operate the existing office building on the project site with less efficient energy facilities as compared to the current energy efficiency standards required for new buildings by current Title 24 Building Energy Efficiency Standards. Although the proposed project would result in less than significant energy impacts, overall, the Alternative 1: No Project Alternative's impacts on energy would be less than that of the proposed project, which would likely increase the demand for energy on the project site given the 24-hour nature of activities at the fire station.

5.5.2.4 Greenhouse Gas Emissions

The Alternative 1: No Project Alternative would not require any grading or site work because no new development would occur on the project site. No new buildings would be constructed on the project site and no increased operations would occur. Therefore, this alternative would not increase greenhouse gas emissions from new on-site uses or additional vehicle trips. No impacts related to greenhouse gas emissions would occur. Therefore, although the proposed project would result in less than significant greenhouse gas impacts, the Alternative 1: No Project Alternative's impacts on greenhouse gas emissions would be less than those of the proposed project.

5.5.2.5 Land Use and Planning

No development would occur on the project site under the Alternative 1: No Project Alternative. The project site would remain developed with the existing office building. This alternative would not require General Plan Amendment or Zoning Amendment as required under the proposed project. However, given that this alternative would not reestablish a permanent fire station in Fire Department Service Area 9, it would not be consistent with several of the City's goals, including providing response times compatible with Long Beach Fire Departments goals and providing the maximum feasible level of public safety protection services. Therefore, the Alternative 1: No Project Alternative's overall impacts related to land use would be less than significant and similar to the proposed project.

5.5.2.6 Noise

The Alternative 1: No Project Alternative would not involve any grading, construction vehicle, or truck trips, nor would it involve demolition activities. Therefore, the noise impacts that are typically associated with grading and construction would not occur under this alternative. Because no development would occur on the project site under this alternative and vehicle trips would not increase from existing uses, there would be no long-term operational increase in noise levels. Therefore, no new noise impacts would occur. Although the proposed project would result in less than significant noise impacts, the Alternative 1: No Project Alternative's impacts would be less than those of the proposed project.

5.5.2.7 Transportation

The Alternative 1: No Project Alternative would not require any grading or site work because no new development would occur on the project site. No new buildings would be constructed on the project site. The project site would remain developed with the existing office building. This alternative would not increase vehicle trips to and from the project site over existing conditions. Therefore, no traffic impacts would occur, and the Alternative 1: No Project Alternative's impacts would be less than those of the proposed project.

5.5.2.8 Tribal Cultural Resources

The Alternative 1: No Project Alternative would not require any grading, site work, or removal of vegetation because no new development would occur on the project site. In addition, no new buildings would be constructed on the project site. Therefore, this alternative would not cause a substantial adverse change in the significance of a tribal cultural resource as defined by CEQA that is

listed or eligible for listing in the California Register of Historical Resources (California Register) or a local register. Further, this alternative would not have the potential to disrupt human remains or result in the discovery of previously unknown tribal cultural resources. No impacts related to tribal cultural resources would occur. Although the proposed project would result in less than significant impacts to tribal cultural resources, the Alternative 1: No Project Alternative's impacts would be less than those of the proposed project.

5.5.3 Overview of Potential Impact/Comparison to Proposed Project

Under the Alternative 1: No Project Alternative, no physical changes would occur on the project site and there would not be a potential for new environmental impacts to occur. Overall, this alternative would result in fewer environmental impacts than the proposed project because the site would remain in its current condition and no construction activities or increase in long-term operations would occur.

5.5.4 Attainment of Project Objectives

The Alternative 1: No Project Alternative would not achieve any of the seven project objectives. Without the proposed project, the project site would not be redeveloped with a fire station that is compatible with the surrounding community and located to provide adequate fire services to the Fire Station No. 9 service area. Further, this alternative would not help the City achieve its goal of providing response times compatible with Long Beach Fire Departments goals. No new facilities for the Fire Station No. 9 crew members would be developed under the Alternative 1: No Project Alternative. Additionally, this alternative would not allow the City to provide enhanced emergency response services from this new fire station facility, with the additional capacity to house a reserve Type 3 engine in the apparatus bay and a fire truck in the rear of the station.

5.6 ALTERNATIVE 2: NO PROJECT ALTERNATIVE - TEMPORARY FIRE STATION LOCATION MADE PERMANENT

5.6.1 Description

Consistent with Section 15126.6 of the *State CEQA Guidelines*, the Alternative 2: No Project Alternative assumes the existing land uses and condition of the project site at the time the Notice of Preparation (NOP) was published (February 2022) would continue to exist without any changes. The Alternative 2: No Project Alternative represents the environmental conditions that would exist if no new development of any kind were to occur on the project site. This alternative would allow existing conditions on the project site to remain unchanged.

As described above, the existing temporary Fire Station No. 9 location at 2019 East Wardlow Road has a limited lease term of three years while a permanent fire station site is selected. Therefore, another variation of the Alternative 1: No Project Alternative is an alternative in which the temporary location at 2019 East Wardlow Road is made to be the permanent location. Under existing conditions, the temporary location is located in Fire Department Service Area 23, which is southeast of and outside of Fire Department Service Area 9, which affects the ability to provide sufficient fire services to the existing Service Area No. 9. The Alternative 2: No Project Alternative would lessen or avoid impacts of the proposed project, but the beneficial impacts of the proposed

project—including returning personnel to the fire service area for the timely and adequate fire services provided by the City—would not occur.

The temporary location was intended to be an interim location until a permanent location for a replacement fire station could be secured and constructed within Fire Department Service Area 9. While some of the Project Objectives (as discussed in Chapter 3.0, Project Description) could be met—providing a fire facility in compliance with National Fire Prevention Association (NFPA) standards and adequate space for fire apparatus—the existing interim location at 2019 East Wardlow Road is outside of the service area and the current lease from a private property owner that would not guarantee the permanent provision of fire facilities. Beneficial impacts of the proposed project include providing adequate and safe fire services within the service area of Fire Station No. 9, which would not be achieved by this alternative. The existing interim station provides space for two apparatus, which would require modification to accommodate three apparatus that would be accommodated by the proposed project. Therefore, this alternative would deny the proposed project's beneficial uses of providing quality fire protection services to the neighborhoods in Fire Department Service Area 9. To achieve the project objectives of serving Fire Department Service Area 9, the mapped fire service areas would require revision, which would affect the citywide established fire areas and the existing stations that serve them. There is no guarantee that revisions of these maps would allow for acceptable service and response times to serve the existing population in order to ensure this alternative achieves established objectives.

5.6.2 Environmental Analysis

5.6.2.1 Air Quality

The Alternative 2: No Project Alternative would not require grading or construction and would not change or increase the intensity of the existing on-site use or increase vehicle trips to and from the project site. Therefore, no additional air pollutant emissions related to grading, construction, additional vehicle trips, and operational uses would be generated under this alternative, and no air quality impacts would occur. As compared to the proposed project, no new construction or operational emissions would occur. The existing interim Fire Station No. 9 location at 2019 East Wardlow Road would continue to operate, which would result in longer trips to serve the fire service area due to its location outside (southeast) of Fire Department Service Area 9. Therefore, although the proposed project would result in less than significant air quality impacts, the Alternative 2: No Project Alternative's impacts on air quality would be less than the air quality impacts associated with the proposed project.

5.6.2.2 Cultural Resources

The Alternative 2: No Project Alternative would not require any grading, site work, or demolition because no new development would occur on the project site. In addition, no buildings would be constructed on the project site. Therefore, this alternative would not cause a substantial adverse change in the significance of a historical resource. Further, the Alternative 2: No Project Alternative would not have the potential to disrupt human remains or result in the discovery of previously unknown archaeological resources. No impacts related to cultural resources would occur under this alternative. Therefore, although the proposed project would result in less than significant impacts to

cultural resources, the Alternative 2: No Project Alternative's impacts on cultural resources would be less than the proposed project as no disturbance would occur on the project site.

5.6.2.3 Energy

The Alternative 2: No Project Alternative would not require any grading or site work because no new development would occur on the project site. No new buildings would be constructed on the project site and no increased operations would occur. The interim fire station would continue to operate under existing conditions. Therefore, this alternative would not increase energy demand on the project site over existing conditions. However, this alternative would continue to operate the existing office building on the project site with less efficient energy facilities as compared to the current energy efficiency standards required for new buildings by current Title 24 Building Energy Efficiency Standards. Although the proposed project would result in less than significant energy impacts, overall, the Alternative 2: No Project Alternative's impacts on energy would be less than that of the proposed project, which would likely increase the demand for energy on the project site given the 24-hour nature of activities at the fire station in contrast to the existing commercial office building.

5.6.2.4 Greenhouse Gas Emissions

The Alternative 2: No Project Alternative would not require any grading or site work because no new development would occur on the project site. No new buildings would be constructed on the project site and no increased operations would occur. The existing interim Fire Station No. 9 location at 2019 East Wardlow Road would continue to operate, which would result in longer trips to serve the fire service area due to its location outside (southeast) of Fire Department Service Area 9. Therefore, this alternative would not increase greenhouse gas emissions from new on-site uses or additional vehicle trips from existing conditions. No impacts related to greenhouse gas emissions would occur. Therefore, although the proposed project would result in less than significant greenhouse gas impacts, the Alternative 2: No Project Alternative's impacts on greenhouse gas emissions would be less than those of the proposed project.

5.6.2.5 Land Use and Planning

No development would occur on the project site under the Alternative 2: No Project Alternative. The project site would remain developed with the existing office building. This alternative would not require a General Plan Amendment or Zoning Amendment as required under the proposed project. An Administrative Use Permit (AUP) was approved by the Zoning Administrator on July 13, 2020, for the interim location for Fire Station No. 9. The AUP approval included the reuse of an existing structure at the former Boeing Fitness Center at 2019 East Wardlow Road for Fire Station No. 9 fire personnel occupation and the construction of two freestanding canopies (approximately 1,400 sf and 450 sf) for use as fire apparatus bays. This interim location permitted fire personnel to occupy an independent facility rather than co-locating at existing Fire Station Nos. 13 and 16.

However, given that the Alternative 2: No Project Alternative would not reestablish a permanent fire station in Fire Department Service Area 9, it would not be consistent with several of the City's goals, including providing response times compatible with Long Beach Fire Departments goals and providing the maximum feasible level of public safety protection services. Therefore, this

alternative's overall impacts related to land use would be less than significant and similar to the proposed project.

5.6.2.6 Noise

The Alternative 2: No Project Alternative would not involve any grading, construction vehicle, or truck trips, nor would it involve demolition activities. Therefore, the noise impacts that are typically associated with grading and construction would not occur under this alternative. Because no development would occur on the project site under this alternative and vehicle trips would not increase from existing uses, there would be no long-term operational increase in noise levels. Therefore, no new noise impacts would occur. Although the proposed project would result in less than significant noise impacts, the Alternative 2: No Project Alternative's impacts would be less than those of the proposed project.

5.6.2.7 Transportation

The Alternative 2: No Project Alternative would not require any grading or site work because no new development would occur on the project site. No new buildings would be constructed on the project site. The project site would remain developed with the existing office building. The existing (at time of NOP publication) interim Fire Station No. 9 location at 2019 East Wardlow Road would continue to operate, which would result in longer trips to serve the fire service area due to its location outside (southeast) of Fire Department Service Area 9. This alternative would not increase vehicle trips to and from the project site over existing conditions. Therefore, no traffic impacts would occur, and the Alternative 2: No Project Alternative's impacts would be less than those of the proposed project.

5.6.2.8 Tribal Cultural Resources

The Alternative 2: No Project Alternative would not require any grading, site work, or removal of vegetation because no new development would occur on the project site. In addition, no new buildings would be constructed on the project site. Therefore, this alternative would not cause a substantial adverse change in the significance of a tribal cultural resource as defined by CEQA that is listed or eligible for listing in the California Register of Historical Resources (California Register) or a local register. Further, this alternative would not have the potential to disrupt human remains or result in the discovery of previously unknown tribal cultural resources. No impacts related to tribal cultural resources would occur. Although the proposed project would result in less than significant impacts to tribal cultural resources, the Alternative 2: No Project Alternative's impacts would be less than those of the proposed project.

5.6.3 Overview of Potential Impact/Comparison to Proposed Project

Under the Alternative 2: No Project Alternative, no physical changes would occur on the project site and there would not be a potential for new environmental impacts to occur. Overall, this alternative would result in fewer environmental impacts than the proposed project because the site would remain in its current condition and no construction activities or increase in long-term operations would occur.

5.6.4 Attainment of Project Objectives

The Alternative 2: No Project Alternative would not achieve any of the seven project objectives. Without the proposed project, the project site would not be redeveloped with a fire station that is compatible with the surrounding community and located to provide adequate fire services to the Fire Station No. 9 service area. Further, this alternative would not help the City achieve its goal of providing response times compatible with Long Beach Fire Departments goals. No new facilities for the Fire Station No. 9 crew members would be developed under the Alternative 2: No Project Alternative. Additionally, the Alternative 2: No Project Alternative would not allow the City to provide enhanced emergency response services from this new fire station facility, with the additional capacity to house a reserve Type 3 engine in the apparatus bay and a fire truck in the rear of the station.

5.7 IDENTIFICATION OF ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an environmentally superior alternative. *State CEQA Guidelines* Section 15126.6(e)(2) states that if the No Project/No Development Alternative is the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives. However, as discussed above, the No Project Alternatives are the only reasonable alternatives.

Both the Alternative 1: No Project Alternative - Current Lease Term and the Alternative 2: No Project Alternative - Temporary Fire Station Location Made Permanent Would be environmentally superior to the proposed project on the basis of the reduced physical impacts that would occur with these alternatives. Neither alternative would require the construction and operation of the fire station included in the proposed project. The Alternative 2: No Project Alternative would be environmentally superior as it has reduced physical impacts as compared to the proposed project and the potential to provide a permanent long-term fire station. However, the Alternative 2: No Project Alternative is outside of the service area and the current lease from a private property owner would not guarantee the permanent provision of fire facilities. Further, the Alternative 2: No Project Alternative would meet only some of the Project Objectives; providing a fire facility in compliance with National Fire Prevention Association (NFPA) standards and adequate space for fire apparatus. However, these Project Objectives would only be met if the temporary fire station facility could be secured as a permanent location, and if the fire service area maps could be revised in a manner that would continue to ensure adequate fire services to the City's population.

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6.0 OTHER CEQA CONSIDERATIONS

6.1 SUMMARY OF SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(c) of the California Environmental Quality Act (CEQA) Guidelines (*State CEQA Guidelines*) requires that an Environmental Impact Report (EIR) describe any significant impacts that cannot be avoided. Specifically, Section 15126.2(c) states that an EIR shall:

> "Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."

The Executive Summary of this document (Chapter 1.0) contains a detailed summary that identifies the proposed project's environmental impacts as compared to existing conditions, proposed mitigation measures, and the level of significance of any impacts after mitigation. No impacts were identified that are considered significant, adverse, and unavoidable after all mitigation is applied. These impacts and proposed mitigation measures are also described in detail in Chapter 4.0, Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation Measures. Chapter 2.0, Introduction, also provides a summary of those topics for which no impacts would occur with implementation of standard conditions and compliance with existing regulations, including agricultural resources; biological resources; mineral resources; population and housing; recreation; and wildfire.

6.2 ENERGY IMPACTS

According to Section 15126.2(b) of the *State CEQA Guidelines*, "if analysis of the project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources, the EIR shall mitigate that energy use."

As described in Section 4.3, Energy, of this Draft EIR, the proposed project would not result in significant impacts related to energy use. Energy (i.e., fuel) usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. In addition, the project's net increase in electricity usage would not represent a substantial demand on available electricity resources. Furthermore, automobiles and transportation-related energy use to and from the project site would be subject to fuel economy and efficiency standards applied throughout the State and fuel efficiency would increase throughout the life of the project. Therefore, implementation of the proposed project would not result in a substantial increase in transportation-related energy uses. Neither construction nor operation of the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, no mitigation is required.

6.3 GROWTH-INDUCING IMPACTS

Sections 15126(d) and 15126.2(e) of the *State CEQA Guidelines* require that an EIR analyze growth-inducing impacts and discuss the ways in which a proposed project could foster economic or population growth or construction of additional housing, either directly or indirectly, in the surrounding environment. This section examines ways in which the proposed project could foster economic or population growth, or the construction of additional housing either directly or indirectly in the surrounding environment. *State CEQA Guidelines* Section 15126.2(d) also requires a discussion of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. To address these issues, potential growth-inducing effects were examined through analysis of the following questions:

- Would the project remove obstacles to, or otherwise foster, population growth (e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development)?

- Would the project foster economic growth?

- Would approval of the project involve some characteristic that may encourage and facilitate other activities that could significantly affect the environment?

Growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment (*State CEQA Guidelines*, Section 15126.2(e)). This issue is presented to provide additional information on ways in which the proposed project could contribute to significant changes in the environment beyond the direct consequences of developing the proposed land uses as described in earlier sections of this Draft EIR.

6.3.1 Removal of Obstacles to, or Otherwise Foster, Population Growth

The proposed project site is located in an extensively developed and urbanized area. In any event, the proposed project would not remove impediments to population growth in the area surrounding the project site. The project site is equipped with existing infrastructure. As discussed in the Initial Study located in Appendix A, the proposed project would connect to existing utility infrastructure through established utility easement agreements. While the proposed project may require additional water, sewer, electricity, and natural gas lines on site compared to existing conditions, such improvements would be intended to meet project-related demand and would not necessitate substantial utility infrastructure improvements.

Further, the alley widening the northern border of the project site is intended to improve access to the project site and would not foster off-site population growth through enhanced transportation routes.

Short-term employment opportunities offered by the construction and operational phases of the proposed project are likely to be met by the available local and regional labor pool. No long-term new jobs will be generated by the proposed project because employees of Fire Station No. 9 have

been maintained and operating out of the current temporary location. The proposed project would generate a small number of temporary construction-related jobs in Long Beach during the 16-month construction period. Construction workers are anticipated to be drawn from the existing regional work force. As of March 2022, the City had a labor force of 234,800, and the County had a labor force of 5,072,300, with approximately 11,700 and 247,700 people unemployed, respectively.[1] The March 2022 unemployment rate was 5 percent for the City and 4.9 percent for the County.[2] This suggests an available local and regional labor pool to serve both the short-term construction and long-term employment opportunities offered by the completion of the proposed project. Therefore, is unlikely that employees would need to be relocated from outside the region to meet the number of employees needed for construction or operation of the proposed project resulting in unanticipated population growth. Operation of the proposed project would not induce substantial population growth or accelerate development.

As described above, since the local labor force is anticipated to fulfill the employment opportunities and the permanent employees would not be newly hired, the proposed project would not generate any new permanent residents on the project site. Therefore, the proposed project would not provide new employment opportunities and would not result in substantial indirect growth or create a significant demand for housing or services in the project vicinity.

Therefore, given that the employment opportunities generated by construction of the proposed project would be filled by people who would commute to the project site, the potential population growth associated with project employees would be minimal.

6.3.2 Foster Economic Growth

In its existing condition, the project site is used as an office for the Catalina Adventures Tours. The project site does not currently generate substantial tax revenue for the City. The proposed project would generate a small number of temporary construction-related jobs in Long Beach during the 16-month construction period. Construction workers are anticipated to be drawn from the existing regional work force, and construction of the proposed project would not be growth inducing from an employment standpoint. As described above, the proposed project would not generate new permanent employment opportunities. Therefore, the proposed project would not be expected to result in significant economic growth.

6.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(d) of the *State CEQA Guidelines* requires that an EIR consider and discuss significant irreversible changes that would be caused by implementation of a proposed project. The *State CEQA Guidelines* specify that the use of nonrenewable resources during the initial and continued phases of a project should be discussed because a large commitment of such resources makes removal or non-use thereafter unlikely. Primary and secondary impacts (e.g., a highway improvement that provides access to a previously inaccessible area) should also be discussed because such changes generally

[1] Employment Development Department (2022). Monthly Labor Force Data for Cities and Census Designated Places (CDP) March 2022 – Preliminary.

[2] Ibid.

commit future generations to similar uses. Irreversible damage can also result from environmental accidents associated with a project and should be discussed.

The types and level of development associated with the proposed project would consume limited, slowly renewable, and nonrenewable resources. This consumption would occur during construction of the proposed project and would continue throughout the operational lifetime of the proposed project. The development of the proposed project would require a commitment of resources that would include (1) building materials, (2) fuel and operational materials/resources, and (3) the transportation of goods and people to and from the project site.

Construction of the proposed project would require consumption of resources that are not replenishable or that may renew so slowly as to be considered nonrenewable. These resources would include certain types of lumber and other forest products (e.g., hardwood lumber), aggregate materials used in concrete and asphalt (e.g., sand, gravel, and stone), metals (e.g., steel, copper, and lead), petrochemical construction materials (e.g., plastics), and water. Construction of the proposed project would require electricity to power construction-related equipment. Construction of the proposed project would not involve the consumption of natural gas. Transportation energy represents the largest energy use during construction and would occur from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Water, which is a limited, slowly renewable resource, would also be consumed during construction of the proposed project. However, given the temporary nature of construction activities, water consumption during construction would result in a less than significant impact on water supplies.

Energy use consumed during operation of the proposed project would be associated with electricity and natural gas consumption. The proposed project would also require a diesel emergency backup generator; however, diesel consumption associated with the emergency backup generator is expected to be minimal and would nominally increase annual diesel fuel use in Los Angeles County. Energy consumption associated with the operation of the proposed project would replace the currently ongoing electricity consumption occurring at the temporary Fire Station No. 9. Similarly, natural gas consumption is currently occurring at the temporary Fire Station No. 9 location, which would be replaced by the proposed project. Energy resources would be used for heating and cooling buildings, transportation, and building lighting. The project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification and would include solar panels on the roof, low-flow plumbing fixtures, LED lighting, and energy-efficient heating and cooling systems supported by highly insulated roof and wall assemblies to reduce heating and cooling costs.

As described in the Initial Study located in Appendix A, operation of the proposed project would involve the use of potentially hazardous materials typical of fire station uses (e.g., solvents, cleaning agents, paints, fertilizers, and pesticides) that, when used correctly and in compliance with existing laws and regulations, would not pose a significant risk. Such materials would be used, handled, stored, and disposed of in accordance with applicable government regulations and standards that would serve to protect against a significant and irreversible environmental change resulting from the accidental release of hazardous materials.

In summary, construction and operation of the proposed project would commit the use of slowly renewable and nonrenewable resources and would limit the availability of these resources on the project site for future generations or for other uses during the life of the proposed project. However, the continued use of such resources during operation would be on a relatively small scale and consistent with regional and local development goals for the area. As a result, the use of nonrenewable resources in this manner would not result in significant irreversible changes to the environment under the proposed project.

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7.0 LIST OF PREPARERS AND PERSONS CONSULTED

7.1 CITY OF LONG BEACH

The following individuals from the City of Long Beach (City) were involved in the preparation of this Draft Environmental Impact Report (EIR):

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The following individuals were involved in the preparation of this Draft EIR:

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- Marlene Watanabe, Environmental Planner
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- Casey Tibbet, Associate/Architectural Historian
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- Lauren Johnson, Technical Editor

7.3 TECHNICAL REPORT PREPARERS

The following individuals were involved in the preparation of the technical reports in support of this Draft EIR. The nature of their involvement is summarized below.

7.3.1 LSA Associates, Inc.

The following individuals were involved in the preparation of the noise analysis:

- J.T. Stephens, Principal
- Jordan Roberts, Senior Noise Analyst

The following individuals were involved in the preparation of the traffic analysis:

- Arthur Black, Principal
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The following individuals were involved in the preparation of the *Archaeological Resources Study of the City of Long Beach Fire Station No. 9 Project in Long Beach, Los Angeles County, California* (December 2021):

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- Gabrieleno Band of Mission Indians - Kizh Nation, Andrew Salas, Chairman
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