100 East Ocean Project

DRAFT ENVIRONMENTAL IMPACT REPORT

SCH No. 2018121006

PREPARED FOR:
The City of Long Beach
Department of Development Services

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I. Executive Summary

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15123, this section of this Draft Environmental Impact Report (EIR) contains a brief summary of the 100 E. Ocean Project (Project) and its potential environmental effects. More detailed information regarding the Project and its potential environmental effects is provided in the following sections of this Draft EIR. Also included in this section is an overview of the purpose and focus of this Draft EIR, a general description of the Project and proposed entitlements, a description of the organization of this Draft EIR, an overview of the Project, a list of areas of controversy, a summary of the public review process for the EIR, and a summary of the alternatives to the Project evaluated herein.

1. Purpose of this Draft EIR

As described in CEQA Guidelines Sections 15123(a) and 15362, an EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effects of a project, identify possible ways to minimize any significant effects, and describe reasonable project alternatives. Therefore, the purpose of this Draft EIR is to focus the discussion on the Project's potential environmental effects that the City of Long Beach (City), as the Lead Agency, has determined to be or potentially may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce or avoid the Project's significant environmental impacts.

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

2. Draft EIR Focus and Effects Found Not to Be Significant

In accordance with CEQA Guidelines Section 15128, an EIR shall contain a brief statement indicating reasons that various possible significant effects of a project were determined not to be significant and not discussed in detail in the Draft EIR. An Initial Study was prepared for the Project and a Notice of Preparation (NOP) was distributed for public comment to the State Clearinghouse, Office of Planning and Research (OPR), responsible agencies, and other interested parties on December 4, 2018. The review period ended January 3, 2019. The Initial Study, NOP, and NOP comment letters are included in Appendix A of this Draft EIR. The Initial Study provides a discussion of the potential environmental impact areas and the reasons that each environmental area is or is not analyzed further in this Draft EIR. The City determined through the Initial Study the potential for significant impacts in the following environmental issue areas:

- Air Quality
- Cultural Resources—Historic Resources
- Greenhouse Gas Emissions
- Noise
- Transportation/Traffic

The City determined through the Initial Study that the Project would result in less than significant impacts with respect to aesthetics; air quality (odors); agricultural and forestry resources; cultural resources (archaeological resources, paleontological resources; and human remains); geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; mineral resources; population and housing; public services; transportation and traffic (air traffic patterns, hazardous design features; and emergency access); and utilities and service systems. In addition, impacts with respect to biological resources and tribal cultural resources were determined to be less than significant with mitigation incorporated. Therefore, these areas are not analyzed further in this Draft EIR.

3. Draft EIR Organization

This Draft EIR is comprised of the following sections:

I. **Executive Summary.** This section describes the purpose of this Draft EIR, Draft EIR focus and effects found not to be significant, Draft EIR organization, Project summary, areas of controversy and issues to be resolved, public review process, summary of alternatives, and a summary of environmental impacts and mitigation measures.

II. **Project Description.** This section describes the Project location, existing conditions, Project objectives, and characteristics of the Project.

III. **Environmental Setting.** This section contains a description of the existing physical and built environment and a list of related projects anticipated to be built within the Project vicinity.

IV. **Environmental Impact Analysis.** This section contains the environmental setting, Project and cumulative impact analyses, mitigation measures, and conclusions regarding the level of significance after mitigation for each of the following environmental issues: air quality; cultural resources – historic resources; greenhouse gas emissions; noise; and transportation/traffic.

V. **Alternatives.** This section provides an analysis of a reasonable range of alternatives to the Project, including: No Project/No Build; Mixed-Use Alternative; Reduced Mixed-Use Alternative; PD-6 Zoning Compliant Residential Alternative; and PD-6 Zoning Compliant Office Alternative.

VI. **Other CEQA Considerations.** This section provides a discussion of significant unavoidable impacts that would result from the Project and the reasons why the Project is being proposed notwithstanding the significant unavoidable impacts. An analysis of the significant irreversible changes in the environment and potential secondary effects that would result from the Project is also presented here. This section also analyzes potential growth-inducing impacts of the Project and potential secondary effects caused by the implementation of the mitigation measures for the Project. Lastly, a summary of the possible effects of the Project that were determined not to be significant within the Initial Study is provided.

VII. **References.** This section lists all the references and sources used in the preparation of this Draft EIR.

VIII. **Acronyms and Abbreviations.** This section provides a list of acronyms and abbreviations used in this Draft EIR.

IX. **List of Preparers.** This section lists all of the persons, public agencies, and organizations that were consulted or contributed to the preparation of this Draft EIR.

This Draft EIR includes the environmental analysis prepared for the Project and appendices as follows:

- Appendix A—Initial Study/NOP/NOP Comment Letters

- Appendix B—Air Quality and Greenhouse Gas Emissions Technical Appendix
- Appendix C—Historic Resources Appendix
  - Appendix C.1—Historic Resources Memorandum
  - Appendix C.2—Interpretive Plan
- Appendix D—Noise Appendix
- Appendix E—Transportation/Traffic Appendix
  - Appendix E.1—Traffic Study
  - Appendix E.2—Parking Memorandum
  - Appendix E.3—TDM Plan
- Appendix F—Alternatives Traffic Memorandum

4. Background and Existing Site Conditions

The majority of the Project Site is currently developed with a surface parking lot, consisting of 80 vehicular parking spaces and an automated pay station. There are no habitable structures or landscaping within the parking lot, and concrete retaining walls line the northern and eastern site boundaries. Access to the southern end of the Jergins Trust Tunnel is sealed along the northern retaining wall. The northern part of the Project Site includes a portion of Victory Park, which currently houses a temporary public art project known as "The Loop," along with seating areas and landscaping. A Long Beach Bike Share station is located at the northwestern corner of the Project Site. One street tree is located along Ocean Boulevard, and eight street trees are located along Pine Avenue adjacent to the Project Site. In addition, a single ingress/egress driveway is located along Seaside Way and two ingress/egress driveways are located along Ocean Boulevard. The Project Site slopes down towards the south at an approximately 7.9 percent grade, with the Ocean Boulevard elevation approximately 25 feet above Seaside Way.

The Project Site is designated as Land Use District (LUD) No. 7, Mixed Use District, and No. 11, Open Space and Park District, by the City's General Plan. As set forth in the General Plan, uses intended for LUD No. 7 include employment centers, such as retail uses, offices, and medical facilities; higher density residences; visitor-serving facilities; personal and professional services; and recreational facilities. LUD No. 11 includes open space and park areas which are intended to remain or be redeveloped in the future in (essentially) an open condition. The Project Site is located within a coastal zone and is therefore subject to the requirements of the City's Local Coastal Program, including a Local

Coastal Development Permit. The Local Coastal Program includes policies to increase use of public transit, walking, and bicycling opportunities, and encourages recreation and visitor-serving facilities.

The Project Site is zoned by the Long Beach Municipal Code (LBMC) as Subarea 7 within the Planned Development District 6 (PD-6), Downtown Shoreline Planned Development District (Downtown Shoreline Plan). The Downtown Shoreline Plan specifically identifies residential, hotel, and office uses within Subarea 7 and includes specific requirements pertaining to ancillary uses such as retail uses, restaurants, and art galleries, as well as access, building design, and setbacks. In addition, as the former site of the Jergins Trust Building, the Subarea 7 requirement to provide a corner cut-off at the northeast corner of the site to create a cohesive entry feature to the Promenade South from Pine Avenue applies to the Project.[1]

The Project Site was formerly owned by the Long Beach Redevelopment Agency (Redevelopment Agency). Prior to the dissolution of the Redevelopment Agency, the Project Site was identified for future development within the Downtown Long Beach Project Area.[2] The Project Site is identified in the approved Successor Agency Long Range Management Plan for "high-density development to maximize overall economic benefit to downtown and in accordance with the use of eminent domain."[3]

5. Overview of the Proposed Project

The Project Applicant proposes to replace the existing parking lot on the Project Site with a new 537,075-square-foot hotel with 429 rooms comprised of 171 king rooms, 152 double queen rooms, 76 suites, and 30 penthouse suites; 23,512 square feet of restaurant uses; and 26,847 square feet of meeting rooms, ballrooms, and pre-function space. In addition, hotel amenities would include a pool deck and bar, fitness center, executive lounge, guest laundry, and a main floor lounge. The Project also includes improvements to Victory Park along Ocean Boulevard including retaining the existing curb cuts on Ocean Boulevard to provide passenger loading and unloading, providing pedestrian pathways, permeable hardscape, and new landscaping. The proposed hotel uses would be located in a 30-story building of up to 375.5 feet in height, consisting of a

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[1] *Per City Ordinance No. ORD-U-0017.*

[2] *Long Beach Redevelopment Agency, "Downtown Long Beach," www.longbeachrda.org/civica/filebank/blobdload.asp?BlobID=2456, accessed January 15, 2019.*

[3] *City of Long Beach, Revised Long Range Property Management Plan, www.lbds.info/documents/LongRangePropMgtPlan/LRPMP.pdf, p. 42, property 113, accessed January 15, 2019.*

tower over a podium, with new landscaping and outdoor amenity areas. The Project would have a total floor area ratio (FAR) of approximately 14.32:1.

Parking for the Project would be provided through a combination of on- and off-site parking. On-site parking would be valet only, with a total of 151 parking spaces provided in one subterranean level and one partial at-grade level with access from Seaside Way and Pine Avenue. Off-site parking would also be valet only, with parking located at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Thirty long-term bicycle parking spaces would be located in a secure room on Level 1, and eight short-term bicycle parking spaces would be located near the main entry.

The Project would reconnect the Project Site with the Jergins Trust Tunnel, a subterranean walkway previously associated with the Jergins Trust Building that extends from the Project Site to the north side of Ocean Boulevard near a sub-grade level of the Renaissance hotel north of Ocean Boulevard (the north end of the tunnel would not be reopened as part of the Project). The tunnel would be used for educational tours, and interpretive signage and images would be introduced to describe the tunnel's history.

Improvements to the portion of Victory Park within the Project Site include the retention of the existing curb cuts to provide passenger loading and unloading, installation of new landscaping, permeable hardscape, and completion of a pedestrian walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site. The existing Long Beach Bike Share station located at the northwest corner of the Project Site would remain in place as part of the Project.

a. Project Design

The hotel would consist of a tower over a podium. Due to the sloped nature of the Project Site, the main entrance facing Ocean Boulevard and opening onto Victory Park would be located on Level 3 of the building along with the main lobby, while the vehicular entrance on Level 1 would be accessed from Seaside Way on the south side of the building. The podium would rise from Seaside Way, with shifting floorplates to create rooftop decks on Levels 3, 6, and 7 along different sides of the building. In particular, on Level 6 an outdoor amenity deck would feature a pool, spa, bar, and planted areas. At the northeastern corner of the building, the lower floors would have an indented, angled footprint to create a corner cut-off in accordance with PD-6, Subarea 7 requirements. The tower would visually rise from Ocean Boulevard and include a restaurant on Level 30, with outdoor dining areas providing views of Downtown Long Beach and the shoreline. Screened mechanical equipment would be located on the roof. The building would have a height of 375.5 feet as measured from Ocean Boulevard per LBMC. Renderings of the building elevations are provided in Figure II-5 through Figure II-8 in Section II, Project Description, of the Draft EIR.

The Project would be designed in a contemporary architectural style with a blend of precast concrete and aluminum framed glass systems. More specifically, over half of the building façade area would consist of precast concrete, metal panels, louvers, or opaque glass. The remaining building façade area would be vision glass, 28 percent of which would have bird safe treatments to minimize bird strikes, consistent with the Bird-Safe Buildings requirements for PD-6. Existing curb cuts on Ocean Boulevard would allow passenger loading and unloading on the Project Site. To help activate the pedestrian environment, the proposed design would include a diagonal walkway from the intersection of Ocean Boulevard and Pine Avenue to the existing Convention Center Walkway. The Project would also capitalize on its location fronting Victory Park by introducing new landscaping and pedestrian pathways. Enhanced paving materials including concrete, cobblestone, decomposed granite, brick, and truncated domes would be utilized along walkways and other outdoor surface areas.

In general, the proposed uses would be located in distinct areas of the new building, as summarized below:

- Level P1—parking;
- Level 1— (Seaside Way)—vehicular access and parking, secondary pedestrian lobby;
- Level 2—meeting rooms, Jergins Trust Tunnel Gallery, access to Jergins Trust Tunnel;
- Level 3—(Ocean Boulevard)—main lobby with reception/concierge area, lounge, restaurant, outdoor patio;
- Level 4—pre-function space, ballroom, ballroom kitchen;
- Level 5—executive lounge;
- Level 6—executive offices, fitness center, amenity deck with outdoor pool and bar, guest laundry room;
- Level 7—hotel rooms, pet-friendly roof deck;
- Levels 8–29—hotel rooms;
- Level 30—restaurant, rooftop deck and bar.

In addition, mechanical rooms, storage, hotel-related office space, and restrooms would be located throughout various floors of the building.

b. Access and Parking

Vehicular access to the Project Site would be provided via driveways along Seaside Way and Pine Avenue, with primary access from Seaside Way. These driveways would provide access to the valet parking areas on Level 1 and subterranean Level P1. In addition, two existing curb cuts on Ocean Boulevard would be utilized for passenger drop-off and valet service along the main entrance to the hotel on Level 3. Access for delivery, trash, and other service vehicles would access the building via Seaside Way via a loading bay at the southeast corner of the Project Site.

Primary pedestrian access to the hotel would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Upon entering, the main lobby would provide stairway and elevator access to the other areas of the building. Secondary pedestrian access would be provided on Level 1 via a small lobby located at the corner of Pine Avenue and Seaside Way. An exit corridor to Pine Avenue would be provided on Level 2.

As noted above, all on- and off-site parking would be valet only. The valet drop-off area would be located near the main entrance to the hotel on Level 3, accessible via Ocean Boulevard. A total of 151 on-site parking spaces would be provided in a two-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). An additional 280 parking spaces would be located off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Additional parking may be provided off-site in the general downtown area for special events and peak usage periods. Valet trips are expected to make a right turn on to eastbound Ocean Boulevard followed by a right at Locust Avenue to access Seaside Way and enter either the on- or off-site parking garage. Delivery, trash, and other service vehicles would access the building via Seaside Way through a loading bay at the southeast corner of the Project Site.

c. Landscaping and Open Space

While PD-6, Subarea 7 does not include specific open space requirements, the Project would provide 37,404 square feet of open space, including improvements to Victory Park totaling 13,158 square feet, new landscaping, and a variety of amenities for hotel guests and visitors including an 11,288-square-foot pool deck and bar. Specifically, the Project would include a pedestrian walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site. An outdoor patio would be located on Level 3, wrapping around the north, west, and south sides of the building. New palm trees would be planted along Seaside Way, Pine Avenue, and Ocean Boulevard within Victory Park, and water efficient plants such as agave, euphorbia, and bamboo muhly would be planted throughout the Project Site and Victory Park. Atop the podium, Level 6 would include various outdoor amenities, including a pool, spa, and planted areas. Level 7 would include an outdoor planted area along the building's eastern side. Levels 26 through 29 would include balconies, and an outdoor seating area with landscaping associated with the proposed restaurant would be located on Level 30. The amenity areas may include amplified sound at the outdoor patio area on Level 3, the pool deck and bar on Level 6, and the rooftop. In addition, any on-site trees or street trees removed during Project construction would be replaced in accordance with the City's Tree Maintenance Policy, LBMC Chapter 14.28 pertaining to street trees, and other applicable City requirements.

d. Lighting and Signage

Exterior lighting would be incorporated along the building and throughout the Project Site for security and wayfinding purposes, as well as entryway lighting along driveways and pedestrian paths for safety. In addition, decorative and architectural lighting would be added to enhance the Site. In accordance with City guidelines, on-site lighting would be shielded to reduce light levels onto off-site uses as well as prevent light aimed upwards to remain in compliance with Dark Sky requirements.

Project signage would include building top identity wall signs, area identification signs, tenant identification wall and blade signs, and directional signage on the building façades. Signage may be projected, raised, and externally illuminated. All Project signage would be visually integrated with the proposed development and would feature colors and lighting that are complementary to the architectural design of the proposed building and the surrounding community. All signage material, sizes, and illumination would comply with LBMC Chapter 21.44 pertaining to on-premises signs.

e. Sustainability Features

The Project would incorporate features to support and promote environmental sustainability. "Green" principles have been incorporated in the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013), and the Project has been designed to achieve the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver® certification. Specific energy conservation, water conservation, and waste reduction features include, but are not limited to, the following:

Energy Conservation and Efficiency

- Use of full-cutoff or fully shielded on-street lighting oriented to pedestrian areas/sidewalks so as to minimize overlighting, light trespass, and glare.
- Use of light emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use.
- Incorporation of energy-efficient design methods and technologies, such as high performance window glazing; undergrounding parking to reduce heat island effects; high-efficiency domestic heaters; and enhanced insulation to minimize solar heat gain.
- Inclusion of outdoor air flow measuring devices, additional outdoor air ventilation, and use of low emitting materials to promote indoor environmental quality.
- Incorporation of generous operable windows and high performance window glazing; and use of natural light.
- Use of insulated plumbing pipes and high-efficiency domestic water heaters.
- Use of insulated mechanical pipes and high-efficiency boilers.
- Use of updated boiler controls to improve efficiency.
- Use of refrigerants that reduce ozone depletion.
- Dedicated outside air units for decoupled heating/cooling.
- Variable air volume kitchen exhaust.
- Occupancy-based hotel room energy management system.
- Demand-controlled ventilation in high occupancy spaces.
- Carbon monoxide monitoring in the parking garage coupled with variable speed garage fans.
- Use of energy-efficient electrical and mechanical equipment and monitoring systems.
- Provision of conduit that is appropriate for future photovoltaic and solar thermal collectors.
- Post-construction commissioning of building energy systems performed on an ongoing basis to ensure all systems are running at optimal efficiency.

Water Conservation

- Inclusion of water conservation measures in accordance with Long Beach Water Department requirements for new development in the City of Long Beach.
- Use of high-efficiency fixtures and appliances.
- Use of high-efficiency Energy Star–rated dishwashers and clothes washers where appropriate.
- Individual metering and billing for water use for the restaurant tenant.
- Prohibition of the use of single-pass cooling equipment (i.e., equipment in which water is circulated once through the system, then drains for disposal with no recirculation).
- Installation of cooling tower automatic water treatment to minimize cooling tower blowdown and water waste.
- Installation of a separate water meter (or submeter), flow sensor, and master valve shutoff for irrigated landscape areas totaling 5,000 square feet and greater.

Water Quality

- Use of on-site storm water treatment and re-use system consisting of a below grade cistern and re-use pump located near the northwest corner of the Project Site. The system will be capable of accommodating up to 3,102 cubic feet of stormwater and a flow rate of up to 0.28 cfs.
- Installation of catch basin inserts and screens to provide runoff contaminant removal.
- Preparation and implementation of a Stormwater Pollution and Prevention Plan, City of Long Beach Low Impact Development Plan, and Standard Urban Stormwater Mitigation Plan, all of which would include Best Management Practices to control stormwater runoff, minimize pollutant loading and erosion effects during and after construction.

Solid Waste

- Provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied.
- Use of building materials with a minimum of 10 percent recycled-content for the construction of the Project.

- Implementation of a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris or minimize the generation of construction waste to 2.5 pounds per square foot of building floor area.

In addition, the Project would include a stormwater capture and reuse system designed to accommodate up to 3,102 cubic feet of stormwater and a flow rate of up to 0.28 cubic feet per second. This system would include underground steel reinforced polyethylene detention tanks with an irrigation reuse pump. The detention system would retain stormwater until it reaches the overflow pipe that connects to the existing storm drain system. The treated stormwater may be used for on-site irrigation.

f. Project Construction and Scheduling

Construction of the Project would commence with demolition of the existing parking lot. This phase would be followed by grading and limited excavation for the placement of building footings. Building foundations would then be laid, followed by building construction, paving/concrete installation, and landscape installation. Project construction is anticipated to occur over approximately 30 months, with completion anticipated in 2022. It is estimated that grading would require approximately 23,500 cubic yards of soil removal and export.[4] As part of the Project, a Construction Traffic Management Plan would be implemented, subject to City review and approval, to minimize potential conflicts affecting local circulation and surrounding uses.

6. Necessary Approvals

The City of Long Beach has the principal responsibility for approving the Project. Approvals required for development of the Project may include, but not be limited to, the following:

- Site Plan Review;
- Local Coastal Development Permit;[5] and

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4 *Final earthwork numbers may change based on soil conditions.*

5 *Pursuant to the LBMC Section 21.25.902, "The Coastal Zone Boundaries are indicated on the official zone map." The City's Coastal Zone Map shows that the Project Site falls within the Coastal Appealable Area of the City's permit jurisdiction, which gives the Planning Commission (or City Council, upon appeal) the authority to issue coastal development permit approval. Local approval of a coastal development permit may be appealed to the California Coastal Commission pursuant to LBMC Section 21.25.908.*

- Other discretionary and ministerial permits and approvals that may be deemed necessary, including but not limited to temporary street closure permits, grading permits, excavation permits, a haul route permit, foundation permits, and building permits.

7. Areas of Controversy/Issues to be Resolved

Potential areas of controversy and issues to be resolved by the City's decision-makers may include those environmental issue areas where the potential for a significant unavoidable impact has been identified, such as cumulative noise during construction. Based on the NOP comment letters provided in Appendix A, issues known to be of concern in the community include, but are not necessarily limited to: air quality, noise, stormwater runoff, traffic congestion, and cumulative impacts. Refer to Appendix A for copies of the NOP comment letters.

8. Public Review Process

As previously indicated, the City prepared an Initial Study and circulated a NOP for public comment to the State Clearinghouse, OPR, responsible agencies, and other interested parties on December 4, 2018. The review period ended January 3, 2019. The NOP letters and comments received during the comment period are included in Appendix A of this Draft EIR.

This Draft EIR is being circulated for a 45-day public comment period. Following the public comment period, a Final EIR will be prepared that will include responses to the comments raised regarding this Draft EIR.

9. Summary of Alternatives

The Draft EIR examined five alternatives to the Project in detail, which include: No Project/No Build; Mixed-Use Alternative; Reduced Mixed-Use Alternative; PD-6 Zoning Compliant Residential Alternative; and PD-6 Zoning Compliant Office Alternative. A general description of these Alternatives is provided below. Refer to Section V, Alternatives, of this Draft EIR for a more detailed description of these alternatives and a comparative analysis of the impacts of these alternatives with those of the Project.

Alternative 1: No Project/No Build

In accordance with the CEQA Guidelines, the No Project Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed. CEQA Guidelines Section 15126.6(e)(3)(B) states "in certain instances, the No Project Alternative means 'no build' wherein the existing environmental setting is maintained." Accordingly, for purposes of this analysis, Alternative 1, the No Project/No Build Alternative, assumes that the Project would not be approved and no new development would occur within the Project Site. Thus, the physical conditions of the Project Site would generally remain as they are today. The Project Site is developed with a surface parking lot consisting of 80 vehicular parking spaces and an automated pay station, as well as portions of Victory Park. No access to the Jergins Trust Tunnel or improvements to Victory Park would be provided. No new construction would occur.

Alternative 2: Mixed-Use Alternative

Alternative 2, the Mixed-Use Alternative, would develop residential, office, restaurant, retail, and hotel uses on the Project Site. Specifically, Alternative 2 would develop 28 restricted-income artist-in-residence live/work lofts; 87 market-rate apartments; 23,000 square-feet of co-working office space; 47,000 square feet of traditional office space; 26,000 square feet of restaurant uses (inclusive of a 17,000 square foot "food hall"); 45,000 square feet of retail uses; and a 200-room, 93,000-square-foot hotel, compared to the 429-room hotel, with 23,512 square feet of restaurant space and 26,847 square feet of meeting and ballroom space proposed under the Project. The total amount of development would be similar to the 537,075 square feet proposed by the Project. The 28 live-work units would consist of 1-bedroom units and the 87 market rate apartments would consist of 13 studio units, 35 1-bedroom units, 35 2-bedroom units, and four 3-bedroom units. The proposed uses would be located in two towers ranging in height from 11 to 20 stories, and 138 to 250 feet in height, compared to the 30-story, 375.5-foot tall building with the Project. A total of 775 vehicle parking spaces would be provided in a 8-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). Similar to the Project, an additional 280 parking spaces would be provided off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Alternative 2 would also provide 11 bicycle parking spaces located in the parking garage. Alternative 2 would include 17,250 square feet of open space consisting of landscaped courtyards and terraces, a sky deck, a pool deck, gym and yoga studio, library/music room, business center, trellised barbeque area, and dog run deck. Vehicular access to the on-site parking would be provided via driveways accessible from Seaside Way and Pine Avenue. The commercial loading dock and loading area are located immediately adjacent to the parking entrance off of Seaside Way. The proposed hotel use would include valet drop-off area would be located near the main entrance to the hotel on Level 3, accessible via Ocean Boulevard. Like the Project, primary pedestrian access to the proposed uses would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Secondary pedestrian access would be provided via a small lobby located at the corner of Pine Avenue and Seaside Way. Like the Project, Alternative 2 would include access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet.

Alternative 3: Reduced Mixed-Use Alternative

Alternative 3 would develop the same mix of uses as Alternative 2, but all square footage would be reduced. Specifically, Alternative 3 would develop a mixed-use project with 23 restricted-income, artist-in-residence, live-work lofts; 69 market rate apartments; 18,400 square feet of co-working office space; 37,600 square feet of traditional office space; 20,800 square feet of restaurant uses, including a 13,600 square foot “food hall”; 36,000 square feet of retail uses; and a 160-room hotel, compared to the 429-room hotel, 23,512 square feet of restaurant space, and 26,847 square feet of meeting and ballroom space proposed by the Project. The total amount of development would be 429,660 square feet compared to 537,075 square feet with the Project. The 23 live-work units would consist of 1-bedroom units and the 69 market rate apartments would consist of 10 studio units, 28 1-bedroom units, 28 2-bedroom units, and three 3-bedroom units. The proposed uses would be located in two towers ranging in height from nine to 16 stories, and 113 to 200 feet in height, compared to the 30-story, 375.5-foot tall building with the Project. A total of 564 vehicle parking spaces would be provided in a 6-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). Similar to the Project, an additional 280 parking spaces would be provided off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Alternative 3 would also provide nine bicycle parking spaces located in the parking garage. Alternative 3 would include 13,800 square feet of open space consisting of landscaped courtyards and terraces, a sky deck, a pool deck, gym and yoga studio, library/music room, business center, trellised barbeque area, and dog run deck. Vehicular access to the on-site parking would be provided via driveways accessible from Seaside Way and Pine Avenue. The commercial loading dock and loading area are located immediately adjacent to the parking entrance off of Seaside Way. The proposed hotel use would include valet drop-off area would be located near the main entrance to the hotel on Level 3, accessible via Ocean Boulevard. Like the Project, primary pedestrian access to the proposed uses would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Secondary pedestrian access would be provided via a small lobby located at the corner of Pine Avenue and Seaside Way. Like the Project, Alternative 3 would include access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet.

Alternative 4: PD-6 Zoning Compliant Residential Alternative

Alternative 4, the PD-6 Zoning Residential Alternative, would develop roughly the same building proposed with the Project, but would include 450 residential units, 5,493 square feet of ground floor retail uses, and 9,507 square feet of ground-floor restaurant uses, compared to the 429-room hotel with 23,512 square feet of restaurant uses proposed by the Project. Like the Project, the proposed uses would be located in a single 537,075-square foot building 30 stories and 375.5 feet in height consisting of a tower over a podium, with new landscaping and outdoor amenity areas. The 450 residential units would consist of 67 studio units, 180 1-bedroom units, 180 2-bedroom units, and 23 3-bedroom units. A total of 731 vehicle parking spaces would be provided in a 7-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). Similar to the Project, an additional 280 parking spaces would be provided off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Alternative 4 would also provide four bicycle parking spaces located in the parking garage. Alternative 4 would include 67,500 square feet of open space consisting of landscaped courtyards and terraces, a sky deck, a pool deck, gym and yoga studio, library/music room, business center, trellised barbeque area, and dog run deck. Vehicular access to the on-site parking would be provided via driveways accessible from Seaside Way and Pine Avenue. The commercial loading dock and loading area are located immediately adjacent to the parking entrance off of Seaside Way. Like the Project, primary pedestrian access to the proposed uses would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Secondary pedestrian access would be provided via a small lobby located at the corner of Pine Avenue and Seaside Way. Like the Project, Alternative 4 would include improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet. However, Alternative 4 would not include access to and restoration of the Jergins Trust Tunnel.

Alternative 5: PD-6 Zoning Compliant Office Alternative

Alternative 5, the PD-6 Zoning Compliant Office Alternative, would develop roughly the same building proposed with the Project, but would include 265,000 square feet of office uses, 9,887 square feet of ground floor retail uses, and 17,113 square feet of ground floor restaurant uses, compared to the 429-room hotel with 23,512 square feet of restaurant uses proposed by the Project. Like the Project, the proposed uses would be located in a single building 30 stories and 375.5 feet in height consisting of a tower over a podium, with new landscaping and outdoor amenity areas. A total of 898 vehicle parking spaces would be provided in a 9-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). Similar to the Project, an additional 280 parking spaces would be provided off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Alternative 5 would also provide 14 bicycle parking spaces located in the parking garage. Alternative 5 would include approximately 5,000 square feet of open space consisting of landscaped courtyards and terraces. Vehicular access to the on-site parking would be provided via driveways accessible from Seaside Way and Pine Avenue. The commercial loading dock and loading area are located immediately adjacent to the parking entrance off of Seaside Way. Like the Project, primary pedestrian access to the proposed uses would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Secondary pedestrian access would be provided via a small lobby located at the corner of Pine Avenue and Seaside Way. Like the Project, Alternative 5 would include access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet.

9. Summary of Environmental Impacts and Mitigation Measures

Table I-1 on page I-18 provides a summary of the Project's environmental impacts.

Table I-1
Summary of Environmental Impacts of the Proposed Project

Environmental Issue	Project Impact
A. AIR QUALITY	
Construction—Regional Impacts	Less Than Significant with Mitigation
Construction—Localized Impacts	Less Than Significant
Construction—Toxic Air Contaminants	Less Than Significant
Operational—Regional Impacts	Less Than Significant
Operational—Localized Impacts	Less Than Significant
Operational—CO Hotspots	Less Than Significant
Operational—Toxic Air Contaminants	Less Than Significant
Operational—Consistency with Plans	Less Than Significant
B. CULTURAL RESOURCES—HISTORIC RESOURCES	
Historic Resources—Direct Impacts	Less Than Significant with Mitigation
Historic Resources—Indirect Impacts	Less Than Significant
C. GREENHOUSE GAS EMISSIONS	
Greenhouse Gas Emissions	Less Than Significant
D. NOISE	
Construction Noise—On-Site[a]	Less Than Significant with Mitigation
Construction Noise—Off-Site	Less Than Significant
Construction Vibration—Building Damage/Human Annoyance	Less Than Significant
Operational Noise—On-Site	Less Than Significant
Operational Noise—Off-Site	Less Than Significant
E. TRANSPORTATION/TRAFFIC	
Construction	Less Than Significant
Operational—Intersection Levels of Service	Less Than Significant
Operational—Regional Transportation System	Less Than Significant
Operational—Public Transit	Less Than Significant
Operational—Access and Circulation	Less Than Significant
Operational—Bicycle, Pedestrian, and Vehicular Safety	Less Than Significant
Operational—Queueing Analysis	Less Than Significant with Mitigation
Operational—Parking	Less Than Significant

[a] *Cumulative impacts associated with on-site noise would be significant and unavoidable.*
Source: Eyestone Environmental, 2019.

A. Air Quality

a. Analysis of Project Impacts

(1) Construction

(a) Regional Construction Impacts

As described in Section II, Project Description, of this Draft EIR, the Project would involve demolition of the existing surface parking lot and construction of a hotel with restaurant and meeting spaces and associated parking. Construction activities would include demolition, excavation, building construction, architectural coatings, and paving. Construction would take place over approximately 30 months, with completion in 2022. During construction, a variety of heavy-duty diesel powered equipment would be used on-site. Building construction and finishing activities would require equipment such as excavators, drill rigs, cranes, concrete pumps, and air compressors. Construction would require demolition of the asphalt parking lot and retaining walls and approximately 23,500 cubic yards of soil removal and export. The Project will require a continuous concrete pour requiring 415 truck loads per day, to be poured over two days. The calculations take into account Project Design Feature AIR-7 which requires use of model year 2007 and newer trucks. As CalEEMod is unable to calculate the emissions reductions due to implementation of Project Design Feature AIR-7, continuous concrete pour emissions were calculated using CARB's EMFAC and spreadsheet methodology. Paved road dust was calculated using USEPA AP-42 equations, consistent with CalEEMod methodology.

Construction of the Project has the potential to create air quality impacts through the use of heavy-duty construction equipment and vehicle trips generated by construction workers traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and construction activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment, such as dozers, loaders, and cranes. During the finishing phase of the building, paving operations and the application of architectural coatings (e.g., paints) and other building materials could potentially release VOCs. The assessment of construction-related air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

The emissions levels presented in Table IV.A-3 in Section IV.A, Air Quality, of this Draft EIR, represent the highest daily emissions projected to occur during each year of construction. As presented therein, construction-related daily maximum regional construction emissions (i.e., combined on-site and off-site emissions) would not exceed the thresholds for VOC, CO, SO_X, PM_{10}, or $PM_{2.5}$. However, construction emissions would exceed the SCAQMD regional significance thresholds for NO_X, and mitigation measures would be required to reduce emissions to a less than significant level. More specifically, the Project's grading and excavation activities would result in an exceedance of the NO_X regional threshold mainly due to the use of heavy equipment and trucks exporting soil. In order to reduce NO_X emissions to a less than significant level, proposed Mitigation Measure AIR-1 would require use of USEPA Tier 4 emissions-compliant excavators and loaders during soil excavation and grading activities. As shown in Table IV.A-3, maximum mitigated regional construction emissions would not exceed SCAQMD significance thresholds. Thus, with mitigation, NO_X emissions would be reduced to a less than significant level.

(b) Localized Impacts from On-Site Construction Activities

In accordance with SCAQMD's methodology, look-up tables provided by SCAQMD were used to determine localized construction emissions thresholds for the Project.[6] Localized Significance Thresholds (LSTs) represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are based on the most recent background ambient air quality monitoring data (2015–2017) for the Project area, presented in Table IV.A-2 in Section IV.A, Air Quality, of this Draft EIR. Although the trend shown therein demonstrates that ambient air quality is improving in the area, the localized construction emissions analysis conservatively did not apply a reduction in background pollutant concentrations for subsequent years, during which construction would occur (i.e., 2019–2022). By doing so, the allowable pollutant increment to not exceed an ambient air quality standard is more stringent. The analysis is based on existing background ambient air quality monitoring data (2015–2017).

Maximum on-site daily construction emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ were calculated using CalEEMod and compared to the applicable SCAQMD LSTs for SRA 4 based on a construction site area of 1 acre. The nearest sensitive receptors to Project construction activities are residential uses located west of the site (approximately 450 feet or roughly 150 meters). However, this analysis conservatively assumes an approximately 100-meter or 328-foot receptor distance.

The maximum daily localized emissions from Project construction and the relevant LSTs are presented in Table IV.A-4 in Section IV.A, Air Quality, of this Draft EIR. As presented therein, construction-related daily maximum localized emissions would not

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[6] *SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-up Table, revised October 2009.*

exceed the SCAQMD daily significance thresholds for NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, localized construction emissions resulting from the Project would result in less than significant localized impacts, and no mitigation measures are required.

(c) Toxic Air Contaminants

The greatest potential for TAC emissions during Project construction would be from diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk-assessment methodology. Because the construction schedule estimates that the phases which require the most heavy-duty diesel vehicle usage, such as site grading/excavation, would last for a much shorter duration (e.g., approximately one month), construction of the Project would not result in a substantial, long-term (i.e., 70-year) source of TAC emissions. Additionally, SCAQMD's CEQA guidance does not require a health risk assessment (HRA) for short-term construction emissions. It is, therefore, not necessary to evaluate long-term cancer impacts from construction activities which occur over a relatively short duration. In addition, there would be no residual emissions or corresponding individual cancer risk after construction. As such, Project-related TAC impacts during construction would be less than significant.

(2) Operation

(a) Regional Operational Impacts

SCAQMD's CalEEMod was used to calculate regional area, energy, mobile source, and stationary emissions. The Project would incorporate Project design features to support and promote environmental sustainability, as discussed further under Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. While these features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce the emissions of criteria air pollutants discussed herein. Project design features incorporated in this analysis include the Project Site's increase in job density, walkability, accessibility to transit, and the provision of on-site pedestrian improvements, among others.

As shown in Table IV.A-5 in Section IV.A, Air Quality, of this Draft EIR, the Project would result in an increase in criteria pollutant emissions which would fall below the SCAQMD daily significance thresholds for long-term regional emissions of each of the criteria pollutants. Therefore, impacts associated with regional operational emissions would be less than significant, and no mitigation measures are required.

(b) Localized Impacts from On-Site Operational Activities

Operation of the Project would not introduce any major new sources of air pollution within the Project Site. Emissions estimates for criteria air pollutants from on-site sources are presented in Table IV.A-6 in Section IV.A, Air Quality, of this Draft EIR. The SCAQMD LST mass rate look-up tables were used to evaluate potential localized impacts. As shown in Table IV.A-6, on-site operational emissions would not exceed any of the LSTs. Accordingly, localized operational impacts would be less than significant.

(c) CO "Hot Spots" Analysis

Consistent with the required CO methodology, if a project intersection does not exceed 400,000 vehicles per day, then the project need not prepare a detailed CO hot spot analysis.

At buildout of the Project, the highest number of average daily trips at a nearby intersection would be approximately 46,000 at the Alamitos Avenue and Ocean Boulevard intersection, which is significantly below the daily traffic volumes that would be expected to generate CO exceedances as evaluated in the 2003 AQMP.[7] This daily trip estimate is based on the peak-hour conditions at the intersection. There is no reason unique to the Air Basin's meteorology to conclude that the CO concentrations at the Alamitos Avenue and Ocean Boulevard intersection would exceed the 1-hour CO standard if modeled in detail, based on the studies undertaken for the 2003 AQMP.[8] Therefore, the Project does not trigger the need for a detailed CO hotspots model and would not cause any new or exacerbate any existing CO hotspots. As a result, impacts related to localized mobile-source CO emissions are considered less than significant. The supporting data for this analysis is included in Appendix B of this Draft EIR.

(d) Toxic Air Contaminants

When considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity of land uses that emit TACs. CARB has published and adopted the *Air Quality and Land Use Handbook: A Community Health Perspective*, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers,

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[7] *Fehr & Peers, 100 E. Ocean Boulevard Transportation Impact Study, January 2019; refer to Appendix E.1 of this Draft EIR.*

[8] *It should be noted that CO background concentrations within the vicinity of the modeled intersection have substantially decreased since preparation of the 2003 AQMP. In 2003, the 1-hour background CO concentration was 5 ppm and has decreased to 2 ppm in 2014.*

rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities).9 SCAQMD adopted similar recommendations in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*.[10] Together, the CARB and SCAQMD guidelines recommend siting distances for both the development of sensitive land uses in proximity to TAC sources and the addition of new TAC sources in proximity to existing sensitive land uses.

The primary sources of potential air toxics associated with Project operations include DPM from delivery trucks (e.g., truck traffic on local streets and idling on adjacent streets). However, these activities, and the land uses associated with the Project, are not considered land uses that generate substantial TAC emissions. It should be noted that SCAQMD recommends that HRAs be conducted for substantial sources of DPM (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.[11] Based on this guidance, the Project is not considered to be a substantial source of diesel particulate matter warranting a refined HRA since daily truck trips to the Project Site would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units. In addition, the CARB-mandated ATCM limits diesel-fueled commercial vehicles (delivery trucks) to idle for no more than 5 minutes at any given time, which would further limit diesel particulate emissions.

The Project would require the installation of a back-up diesel-powered emergency generator. Any new generator would be required to comply with all applicable rules and regulations including Best Available Control Technology (BACT), which would require the generator to be equipped with a diesel particulate filter. Consistent with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines), the emergency generator would be limited to operate no more than 200 hours a year and only in the event of an emergency power failure or for routine testing and maintenance. Compliance with these rules and regulations would ensure that potential health risk impacts related to the emergency generator would be less than significant.

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[9] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

[10] *SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.*

[11] *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2002.*

As the Project would not contain substantial TAC sources and is consistent with the CARB and SCAQMD guidelines, the Project would not result in the exposure of off-site sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0, and potential TAC impacts would be less than significant.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, petroleum refinery). The Project would not include these types of potential industrial manufacturing process sources. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides, etc.) for the types of proposed land uses would be below thresholds warranting further study under California Accidental Release Program (CalARP). As such, the Project would not release substantial amounts of TACs, and impacts on human health would be less than significant.

(e) Consistency with Plans

(i) SCAQMD CEQA Air Quality Handbook Policy Analysis

The following analysis addresses the Project's consistency with applicable SCAQMD and SCAG policies, inclusive of regulatory compliance and the Project design features discussed herein. In accordance with the procedures established in the SCAQMD's *CEQA Air Quality Handbook*, the following criteria are required to be addressed in order to determine the Project's consistency with applicable SCAQMD and SCAG policies:

- Would the project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations; or
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Would the project exceed the assumptions utilized in preparing the AQMP?

With respect to the first criterion, as discussed in the preceding Subsection 3.d, localized concentrations of NO_2 as NO_X, CO, PM_{10}, and $PM_{2.5}$ have been analyzed for the Project. Since VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. Due to the role VOCs play in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established. SO_2 emissions would be negligible during construction and long-term operations, and, therefore, would not have the potential to cause or affect a violation of the SO_2 ambient air quality standard.

Particulate matter is the primary pollutant of concern during construction activities, and therefore, the Project's PM_{10} and $PM_{2.5}$ emissions during construction were analyzed: (1) to ascertain potential effects on localized concentrations; and (2) to determine if there is a potential for such emissions to cause or affect a violation of the ambient air quality standards for PM_{10} and $PM_{2.5}$. As shown in Table IV.A-4 in Section IV.A, Air Quality, of this Draft EIR, the increases in PM_{10} and $PM_{2.5}$ emissions during construction would not exceed the SCAQMD-recommended significance thresholds at sensitive receptors in proximity to the Project Site.

Additionally, the Project's maximum potential NO_X and CO daily emissions during construction were analyzed to ascertain potential effects on localized concentrations and to determine if there is a potential for such emissions to cause or affect a violation of an applicable ambient air quality standard. As shown in Table IV.A-4, NO_X and CO would not exceed the SCAQMD-recommended significance threshold and would not have a long-term impact on the region's ability to meet state and federal air quality standards. Therefore, Project construction would not result in a significant impact with regard to localized air quality.

Because the Project would not introduce any substantial stationary sources of emissions, CO is the preferred benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations.[12] As indicated earlier, no intersections would require a CO hotspot analysis, and impacts would be less than significant. Therefore, the Project would not increase the frequency or severity of an existing CO violation or cause or contribute to new CO violations.

An analysis of potential localized operational impacts from on-site activities also was conducted. As shown in Table IV.A-6 in Section IV.A, Air Quality, of this Draft EIR, localized NO_2 as NO_X, CO, PM_{10}, and $PM_{2.5}$ operational impacts would be less than significant. Therefore, the Project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants. As the Project would not exceed any of the state or federal standards, the Project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP.

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12 *SCAQMD, CEQA Air Quality Handbook, Chapter 12, Assessing Consistency with Applicable Regional Plans, 1993.*

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2016–2040 RTP/SCS regarding population, housing, and growth trends. Thus, SCAQMD's second criterion for determining consistency focuses on whether or not the Project exceeds the assumptions utilized in preparing the forecasts presented in the AQMP. Determining whether or not a project exceeds the AQMP assumptions involves the evaluation of three criteria: (1) consistency with applicable population, housing, and employment growth projections; (2) Project mitigation measures; and (3) appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis with respect to each of these three criteria.

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

A project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2016 AQMP, two sources of data form the basis for the projections of air pollutant emissions: the City of Long Beach General Plan and SCAG's *Regional Transportation Plan* (RTP). The General Plan, which serves as a comprehensive, long-term plan for future development of the City, was originally adopted in 1974.

In April 2016, SCAG adopted the 2016–2040 RTP/SCS. The 2016–2040 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. Refer to Subsection A.a.(2)(e)(ii), City of Long Beach Policies, in Section IV.A, Air Quality, for a discussion of the Project's consistency with applicable goals, objectives, and policies of the General Plan Air Quality Element.

As discussed under Checklist Question 13.a of the Initial Study, provided in Appendix A, of this Draft EIR, the Project does not include residential uses and is not expected to result in a residential population increase. With respect to Project operation, the proposed hotel and restaurant uses would include a range of full-time and part-time positions that would likely be filled by persons already residing in the vicinity of the workplace and who generally would not relocate their households for such employment opportunities. As such, the Project would be unlikely to create new households in the area or generate an indirect demand for additional housing. Project-related employment growth would be within the SCAG 2016–2040 RTP/SCS projections, which form the basis of the 2016 AQMP growth projections. Because the Project would be consistent with the land use designations in the General Plan of the City of Long Beach, and more specifically, the

Downtown Shoreline Plan (discussed in further detail in Checklist Question 10, Land Use and Planning, of the Initial Study, provided in Appendix A, of this Draft EIR), the Project also would be considered consistent with the region's AQMP. Thus, operation of the Project would have a less than significant impact related to consistency with the AQMP.

- Does the project implement all feasible air quality mitigation measures?

The Project would comply with all applicable regulatory standards as required by SCAQMD. The Project also would incorporate Project design features to support and promote environmental sustainability as discussed under Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. While these features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce the criteria air pollutants discussed herein. In addition, as the Project would have significant regional NO_x impacts without incorporation of mitigation, the Project would incorporate Mitigation Measure AIR-1, which would reduce construction emissions for all pollutants. With implementation of Mitigation Measure AIR-1, NO_X emissions would be reduced to a less than significant level. As such, the Project meets this AQMP consistency criterion.

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

With regard to land use developments such as the Project, air quality policies focus on the reduction of vehicle trips and vehicle miles traveled. The Project would support a number of air quality-related policies established by the City of Long Beach and SCAG. The Project is located within 0.25 mile of the Metro Blue Line Downtown Long Beach station, which would facilitate the use of mass transit, thereby reducing vehicle trips and miles travelled. The Project is also located within 0.5 mile of Downtown Long Beach, which would also promote walking while reducing vehicle trips to and from the Project Site.

The surrounding Project area includes a mature network of pedestrian facilities, including sidewalks, crosswalks, and pedestrian safety features along Ocean Boulevard, Pine Avenue, and Seaside Way. Furthermore, bike routes, lanes, and paths are available in the Project area. Additionally, the existing Long Beach Bike Share station located at the northwest corner of the Project Site would remain in place as part of the Project. The location of the Project Site and its accessibility to a variety of transportation options would encourage the use of alternative modes of transportation.

In addition, the Project would incorporate features to support and promote environmental sustainability, including energy conservation, water conservation, and waste reduction features. Such features would further reduce air emissions. Furthermore, to minimize particular emissions and control dust during construction, the Project would comply with SCAQMD Rule 403.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of the proposed Project on air quality in the Air Basin. While development of the Project would result in short-term regional impacts, Project development would not have a significant long-term impact on the region's ability to meet state and federal air quality standards. The Project would comply with SCAQMD Rule 403 and would implement all necessary feasible mitigation measures for control of NO_X. In addition, the Project would be consistent with the goals and policies of the AQMP for control of fugitive dust. The Project's long-term influence would also be consistent with the goals and policies of the AQMP and is, therefore, considered consistent with SCAQMD's AQMP.

(ii) City of Long Beach Policies

The City's General Plan Air Quality Element (1996) includes goals and policies related to air quality that apply to the Project. As specified in Project Design Feature AIR-1, the Project would be required to implement a variety of measures aimed at controlling dust during Project construction, consistent with General Plan Air Quality Element Policy 6.1. Policy 6.1 states that the City shall "further reduce particulate emissions from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses." General Plan Air Quality Element Policy 7.1 states that the City shall "reduce energy consumption through conservation improvements and requirements." Consistent with this policy, the Project would incorporate features to support and promote environmental sustainability which would also serve to reduce air pollutant emissions. As discussed further in Section II, Project Description, of this Draft EIR, "green" principles are incorporated as part of the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013). Additionally, the Project has been designed to achieve LEED Silver® certification and would therefore incorporate a number of energy conservation, water conservation, and waste reduction features. Overall, the Project would meet or support relevant air quality policies set forth in the City's General Plan Air Quality Element.

b. Cumulative Impacts

(1) Construction

With respect to the Project's construction-period air quality emissions and cumulative Air Basin-wide conditions, SCAQMD has developed strategies (e.g., SCAQMD Rule 403) to reduce criteria pollutant emissions outlined in the AQMP pursuant to federal CAA mandates. As such, the Project would comply with regulatory requirements, including

SCAQMD Rule 403 requirements. In addition, the Project would comply with adopted AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that potentially significant impacts be mitigated to the extent feasible, all construction projects Air Basin-wide would comply with these same requirements (i.e., SCAQMD Rule 403) and would implement all feasible mitigation measures when potentially significant impacts are identified.

According to SCAQMD, individual construction projects that exceed their recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment. With implementation of Mitigation Measure AIR-1, construction-related daily emissions at the Project Site would not exceed any of SCAQMD's regional or localized significance thresholds. Thus, the Project's contribution to cumulative construction-related regional and localized emissions would not be cumulatively considerable and, therefore, would be less than significant.

Similar to the Project, the greatest potential for TAC emissions with respect to each related project would generally involve DPM emissions associated with heavy equipment operations during demolition and grading/excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. As previously discussed, "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Construction activities with respect to each related project would not result in a long-term (i.e., 70-year) substantial source of TAC emissions. In addition, SCAQMD's *CEQA Air Quality Handbook* and supplemental online guidance/information do not require an HRA for short-term construction emissions. It is, therefore, not required or meaningful to evaluate long-term cancer impacts from construction activities which occur over relatively short durations. As such, cumulative toxic emission impacts during construction would be less than significant.

(2) Operation

According to SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed SCAQMD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants. Operational emissions from the Project would not exceed any of SCAQMD's regional or localized significance thresholds at Project buildout. Therefore, the emissions of non-attainment pollutants and precursors generated by Project operation would not be cumulatively considerable.

With respect to TAC emissions, neither the Project nor any of the related projects (which include residential, commercial/retail, hotel, office, and restaurant uses), would represent a substantial source of TAC emissions, which are more typically associated with large-scale industrial, manufacturing, and transportation hub facilities. The Project and related projects would be consistent with the recommended screening level siting distances for TAC sources, as set forth in CARB's Land Use Guidelines, and the Project and related projects would not result in a cumulative impact requiring further evaluation. However, the Project and each of the related projects would likely generate minimal TAC emissions related to the use of consumer products and landscape maintenance activities, among other things. Pursuant to AB 1807, which directs CARB to identify substances as TACs and adopt ATCMs to control such substances, the SCAQMD has adopted numerous rules (primarily in Regulation XIV) that specifically address TAC emissions. These SCAQMD rules have resulted in and will continue to result in substantial Air Basin-wide TAC emissions reductions. As such, cumulative TAC emissions during long-term operations would be less than significant. In addition, the Project would not result in any substantial sources of TACs that have been identified in CARB's Land Use Guidelines. Accordingly, the Project would not result in a cumulatively considerable impact, and cumulative impacts would be less than significant.

c. Project Design Features

The following project design features pertaining to air quality which are required in compliance with regulatory requirements would be implemented as part of the Project:

Project Design Feature AIR-1: In accordance with South Coast Air Quality Management District Rule 403, the Project shall incorporate fugitive dust control measures at least as effective as the following measures:

- Use watering to control dust generation during the demolition of structures;
- Clean-up mud and dirt carried onto paved streets from the site;
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- All haul trucks would be covered or would maintain at least 6 inches of freeboard;
- All materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of spillage or dust;
- Suspend earthmoving operations or additional watering would be implemented to meet Rule 403 criteria if wind gusts exceed 25 mph;

- The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable control of dust caused by wind. All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions; and
- An information sign shall be posted at the entrance to the construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. A construction relations officer shall be appointed to act as a community liaison concerning on-site activity, including investigation and resolution of issues related to fugitive dust generation.

Project Design Feature AIR-2: In accordance with California Code of Regulations Title 13, Section 2485, the idling of all on-road diesel-fueled commercial haul and dump trucks (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location.

Project Design Feature AIR-3: In accordance with California Code of Regulations Title 17, Section 93115, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

Project Design Feature AIR-4: The Project shall comply with South Coast Air Quality Management District Rule 1113 limiting the volatile organic compound content of architectural coatings.

Project Design Feature AIR-5: The Project shall install odor-reducing equipment in accordance with South Coast Air Quality Management District Rule 1138.

Project Design Feature AIR-6: New on-site facility nitrogen oxide emissions shall be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters) as required by South Coast Air Quality Management District Regulation XIII, New Source Review.

Project Design Feature AIR-7: During the mat pour foundation phase, all trucks hauling concrete shall be model year 2007 or newer.

The Project also would incorporate features to support and promote environmental sustainability which would serve to reduce air pollutant emissions. "Green" principles are incorporated as part of the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013), and the Project has been designed to achieve LEED Silver® certification. Specific energy conservation, water conservation, and waste reduction features.

d. Mitigation Measures

The following mitigation measure is designed to reduce the Project's air quality impacts during construction.

Mitigation Measure AIR-1: *Tier 4 Construction Equipment.* The Project shall utilize off-road diesel-powered construction equipment that meets or exceeds CARB and USEPA Tier 4 off-road emissions standards for excavators and loaders during Project excavation and grading activities. To the extent possible, pole power shall be made available for use with electric tools, equipment, lighting, etc. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment.

e. Level of Significance After Mitigation

(1) Construction

As presented in Table IV.A-3 in Section IV.A, Air Quality, of this Draft EIR, implementation of the Project Design Features and the mitigation measure described herein would reduce construction emissions of all pollutants. In particular, maximum regional NO_X emissions would be reduced by approximately 17 percent. Thus, with mitigation, NO_X emissions would be reduced to a less than significant level. Impacts associated with all other criteria pollutants would remain less than significant.

In terms of localized air quality impacts, Table IV.A-4 in Section IV.A, Air Quality, of this Draft EIR, shows that maximum construction emissions for off-site sensitive receptors would not exceed any of the SCAQMD-recommended localized screening thresholds, and impacts would be less than significant. No mitigation measures are required.

No significant impacts related to TAC emissions during construction are anticipated to occur as a result of the Project. As such, potential Project-level and cumulative TAC impacts would be less than significant. No mitigation measures are required.

(2) Operation

Project-level impacts under the Project with regard to regional and localized air quality would be less than significant. In addition, in accordance with SCAQMD guidance, a project does not result in significant cumulative impacts when it does not exceed project-level thresholds. Therefore, cumulative impacts also would be less than significant. Furthermore, the Project would not result in a new long-term source of TACs. The Project would be consistent with CARB siting guidelines, and the Project is not considered to be a substantial source of diesel particulate matter. Potential air toxic impacts to sensitive receptors from Project TAC emissions would therefore be less than significant. Furthermore, Project development would be consistent with the air quality policies set forth in SCAQMD's AQMP and the City of Long Beach Air Quality Element, resulting in a less than significant impact. No mitigation measures are required.

B. Cultural Resources—Historic Resources

a. Analysis of Project Impacts

(1) Direct Impacts

As part of Project development, the Jergins Trust Tunnel would be reopened and connected to the lower level of the proposed building. A study session to review the Interpretative Plan was conducted on September 10, 2018 with the Cultural Heritage Commission. The Interpretative Plan is included as Appendix C.2 of this Draft EIR. As discussed therein, improvements include a new entry lobby would be constructed adjacent to the tunnel which would feature an interpretive exhibit with signage, salvaged artifacts from the Jergins Trust Building, wood artifact installation to re-create one wall from available wood artifacts, and an audio/video display. The tunnel would be cleaned, stabilized, and improved to allow public tours to access the tunnel; such improvements may include cleaning and minor repair of the tiled surfaces, improving lighting and ventilation, and a new wall or enclosure at the tunnel's south end connecting to the proposed lobby. The Project therefore has the potential to materially alter historic aspects of the tunnel. In addition, ground movement and vibration from construction of the Project may have the potential to damage the tunnel. These impacts could significantly affect the tunnel. However, implementation of Mitigation Measures HIS-1 and HIS-2 would reduce these impacts to a less than significant level. Specifically, Mitigation Measure HIS-1 would require all work to be performed in accordance with the Secretary of the Interior's Standards, which per CEQA Guidelines Section 15064.5 is generally considered to be mitigated to a less than significant level.

(2) Indirect Impacts

Based on the CEQA Guidelines, a proposed project can result in potentially significant impacts if it changes the immediate surroundings of a historic resource such that the significance of the resource is "materially impaired." A historic resource's significance is materially impaired when it can no longer convey the significance that justifies its eligibility as a historic resource; in other words, when it has lost its integrity.[13] As previously discussed, the National Park Service identifies seven aspects or qualities that in various combinations define integrity: location, design, setting, materials, workmanship, feeling, and association.

Implementation of the Project would not impact the integrity with regard to location, design, materials, workmanship, feeling, or association of either the Ocean Center Building or the Breakers which are individual historic resources and not part of a historic district. Given that the Project would replace a surface parking lot with a new, 30-story building, it would alter the setting adjacent to these two historic properties. However, that change is not extensive enough for either the Ocean Center Building or the Breakers to lose their overall integrity or historic status, particularly since the original setting around both buildings has been substantially altered since their construction in the 1920s. Currently, Ocean Boulevard is a major urban thoroughfare in Long Beach that has been developed with a mix of low- and high-rise buildings dating from the 1920s through the 2010s. More specifically, Ocean Boulevard includes a mix of 3- to 20-story commercial, residential, and civic buildings representing a variety of styles and periods from the 1920s Mediterranean Revival styles of the Ocean Center Building and the Breakers, to the 1960s and 1970s Late Modern designs of the Long Beach Performing Arts Center, as well as the 1980s mirror glass and panel-clad buildings like the Salvation Army Building directly east of the Project Site. Additionally, new development includes the Oceanaire mid-rise residential development now under construction adjacent to the Ocean Center Building to the west. Furthermore, to the south of both historic buildings, the original shoreline was filled to allow for construction of the Long Beach Convention Center in the 1970s and the marina in the early 1980s, so the historic relationship of the Ocean Center Building and the Breakers to the beach no longer exists. Nevertheless, these buildings remain historic and are able to convey their significance despite the changes in the surrounding setting.

While the scale of the Project would be larger than many of the surrounding buildings, the proposed hotel would be similar in height to the Wells Fargo Bank building (completed in 1990) located one block to the northwest. Nonetheless, the Ocean Center Building and the Breakers are sufficiently large and separated from the Project Site that they would remain distinguishable and distinct along Ocean Boulevard.

The Project would also respect the continuous line of Victory Park and would be set back from the street, in line with both the Ocean Center Building and the Breakers. The

[13] *Integrity is the ability of a resource to convey its historic significance through its physical features and is defined by the National Park Service as "the authenticity of property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic period."*

portion of Victory Park within the Project Site would retain the Ocean Boulevard original curb cuts and drive area of the Jergins Trust Building, be improved with new landscaping and a pedestrian walkway, consistent with the physical layout of Victory Park on nearby properties. At the southern end of the Project, the building podium would mirror the rear section of the Ocean Center Building, while the setback along the building's northeast corner and the upper floor balconies would provide architectural articulation. The glass curtain wall of the proposed building would reflect its period of construction and the mix of materials that presently line Ocean Boulevard.

Overall, the Project would continue the trend of changes to the area around the Ocean Center Building and the Breakers, but not to the extent that the integrity of these historic resources would be materially impacted. However, the Project Site itself has not been part of the historic setting since the Jergins Trust Building was demolished; by reopening the Jergins Trust Tunnel, the Project would have a positive impact on the historic setting of the extant buildings. Indirect impacts on historic resources would be less than significant, and no mitigation measures would be required.

b. Cumulative Impacts

As indicated in Section III, Environmental Setting, of this Draft EIR, there are 55 related projects in the general vicinity of the Project Site. While the majority of the related projects are located a fair distance from the Project Site and are not considered historic resources, Related Project No. 7, the Ocean Center redevelopment project, is located across Pine Avenue from the Project Site to the west; and Related Project No. 47, The Breakers redevelopment, involves the adaptive reuse of historic buildings. Collectively, the related projects near the Project Site involve primarily residential, retail, restaurant, office, hotel, and recreational uses, consistent with existing uses in the Project area.

Although impacts to historic resources tend to be site-specific, a cumulative impact analysis of historic resources determines whether the impacts of a project and the related projects in the surrounding area, when taken as a whole, would substantially diminish the number of historic resources within the same or similar context or property type. Specifically, cumulative impacts would occur if the Project and related projects affect local resources with the same level or type of designation or evaluation, affect other structures located within the same historic district, or involve resources that are significant within the same context. As previously evaluated, potential Project-related impacts to the historic resources adjacent to the Project Site would be less than significant, and potential impacts to the Jergins Trust Tunnel would be less than significant with mitigation incorporated. The Project would not result in a substantial adverse change to the immediate surroundings of the nearby historic resources to such a degree that their eligibility as resources would be materially impaired. They would continue to be eligible for listing as historic resources defined by CEQA. Furthermore, the Project would restore access to the Jergins Trust Tunnel, a City of Long Beach Historic Landmark. To the extent that any related projects have the potential to affect the integrity of historic resource(s), mitigation would be required. In particular, any improvements to the Breakers building would be subject to the Secretary of the Interior's Standards, which as discussed above, is generally considered as mitigated to a less than significant level. Therefore, the Project would not result in any incremental increase in impacts to historic resources, and the Project's impacts to historic resources would not be cumulatively considerable. As such, cumulative impacts to historic resources would be less than significant.

c. Project Design Features

No specific project design features are proposed with regard to historic resources.

d. Mitigation Measures

Mitigation Measure HIS-1: All work in and around the Jergins Trust Tunnel shall comply with the Secretary of the Interior's Standards. This includes, among others, using the gentlest means possible for cleaning, retaining distinctive materials and features, and designing alterations and news construction that is compatible with its historic character. Other specific measures to ensure work complies with the Secretary of the Interior's Standards include the following:

- A qualified professional historic architect or historic preservation consultant that meets the Secretary of the Interior's Professional Qualification Standards shall be retained as part of the Project team. The historic architect or preservation professional shall participate in the design of the Project as it relates to Jergins Trust Tunnel through design development and construction documents to ensure compliance with the Secretary of the Interior's Standards.
- The historic architect or preservation professional shall prepare a report at the conclusion of the design development phase of the Project analyzing compliance with the Secretary of the Interior's Standards. The report should identify and catalog all character defining features of the tunnel and provide recommendations for protection and treatment. The report shall be submitted to the City of Long Beach's preservation staff for their review and approval prior to the issuance of building permits.
- The historic architect or preservation professional shall participate in period monitoring of the Secretary of the Interior's Standards compliance during construction to completion. The monitoring shall

include field notes, photographs, and other documentation of the Project as it relates to Jergins Trust Tunnel. The Secretary of the Interior's Standards monitoring may be performed in conjunction with the construction monitoring required pursuant to Mitigation Measure CUL-2.

Mitigation Measure HIS-2: The Applicant shall implement a Construction Monitoring Plan prepared by a qualified structural engineer, historic architect, and/or other professional to ensure the protection of Jergins Trust Tunnel during construction from damage due to underground excavation, pile driving, and general construction processes as well as settlement or earth movement from the removal of adjacent soil and features. Prior to issuance of an earthwork or demolition permit, the Construction Monitoring Plan and protection measures shall be reviewed by a qualified professional historic architect or historic preservation consultant that meets the Secretary of the Interior's Professional Qualifications Standards to ensure the measures would adequately protect the Jergins Trust Tunnel. The historic architect or historic preservation professional shall participate in monitoring of the tunnel during construction to completion, per the procedures set forth in the Construction Monitoring Plan. The Construction Monitoring Plan shall include the following procedures to:

- Document the baseline conditions of the Jergins Trust Tunnel prior to any ground disturbing activity in a Preconstruction Survey Report;
- Reduce potential impacts from construction activities on the physical features of the tunnel, such as shoring, maximum vibration levels, or other methods;
- Monitor vibration and settlement throughout construction using survey markers or other monitoring devices;
- Determine when construction impacts are occurring, and actions needed to halt, mitigate, repair, and/or avoid these impacts;
- Monitor the Jergins Trust Tunnel with periodic site visits during construction (such as monthly or at specific milestones that have the potential to cause damage), producing field reports with photo and illustrative documentation for each monitoring session;
- Conduct a post-construction survey prior to the issuance of the Certificate of Occupancy, taking into account any conservation or stabilization work of the tunnel to ensure that significant adverse impacts have not occurred to the tunnel from construction-related activities.

e. Level of Significance After Mitigation

Mitigation Measures HIS-1 and HIS-2 would reduce potential impacts to historic resources to a less than significant level. Cumulative impacts on historic resources also would be less than significant.

C. Greenhouse Gas Emissions

a. Analysis of Project Impacts

(1) Construction Impacts

Project construction is anticipated to occur over approximately 30 months, with completion anticipated in 2022. It is estimated that grading would require approximately 23,500 cubic yards of soil removal and export.[14] A summary of construction details (e.g., schedule, equipment mix, and vehicular trips) and CalEEMod modeling input assumptions and output files are provided in Appendix B of this Draft EIR. The emissions of GHGs associated with construction of the Project were calculated for each year of construction activity. A summary of GHG emissions for each year of construction is presented in Table IV.C-4 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR.

As presented in Table IV.C-4, construction of the Project is estimated to generate a total of 1,931 metric tons of GHGs measured as an equivalent mass of carbon dioxide (CO_2e). As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.[15] Accordingly, when amortized, Project construction would generate an estimated 64 $MTCO_2e$ per year.

(2) Operational Impacts

(a) Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment, based on CalEEMod's default values for types of sources and emission factors. As shown in Table IV.C-5 in Section

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[14] Final earthwork numbers may change based on soil conditions.

[15] SCAQMD Governing Board Agenda Item 31, December 5, 2008.

IV.C, Greenhouse Gas Emissions, of this Draft EIR, the Project is expected to result in a total of less than 1 $MTCO_2e$ per year from area sources.

(b) Electricity and Natural Gas Emissions

GHGs are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; thus, electricity use in a building generally causes emissions in an indirect manner.

Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for SCE were selected in CalEEMod. Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod electricity and natural gas usage rates are based on the CEC-sponsored California Commercial End-Use Survey (CEUS) and California Residential Appliance Saturation Survey (RASS) studies.[16] The data are specific for climate zones; Zone 11 was selected for the Project Site based on the ZIP Code tool. Since these studies are based on older buildings, CalEEMod provides adjustments to account for more stringent requirements under the 2016 Title 24 building codes.

The Project incorporates features to support and promote environmental sustainability. In particular, the Project has been designed to achieve LEED Silver® certification, which would serve to reduce Project energy consumption.

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[16] *CEC, Commercial End-Use Survey, March 2006, and California Residential Appliance Saturation Survey, October 2010.*

As shown in Table IV.C-5 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, Project GHG emissions resulting from electricity and natural gas usage would result in a total of 2,015 $MTCO_2e$ per year, which reflects a four percent reduction in energy emissions as compared to a Project without Reduction Measures.

(c) Mobile Source Emissions

Mobile-source emissions were calculated using the SCAQMD-recommended CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and VMT. The Project's trip generation estimates were provided by Fehr & Peers Transportation Consultants.[17] As discussed in Section IV.E, Transportation/Traffic, of this Draft EIR, to calculate daily trips, the number of hotel rooms and amount of building area for the restaurant uses were multiplied by the applicable trip generation rates based on the Institute of Transportation Engineers' (ITE) *Trip Generation, 10th Edition*.

CalEEMod calculates VMT based on the type of land use, trip purpose, and trip type percentages for each land use subtype associated with the Project (primary, diverted, and pass-by). The model assumes that diverted trips are 25 percent of the primary trip lengths; pass-by trips are assumed to be 0.1 mile in length and are a result of no diversion from the primary route. The Los Angeles County urban primary trip distance was selected for this analysis.

The Project's design also includes characteristics that would reduce trips and VMT as compared to a project without VMT reducing measures within the South Coast Air Basin (Air Basin), as measured by CalEEMod. The Project represents an infill development within an urbanized area that would introduce new uses on the Project Site, including new hotel and restaurant uses within an HQTA. The increase in land use diversity and the complementary mix of uses on the Project Site would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project Site is located within 0.25 mile of the Metro Blue Line Downtown Long Beach station, which would facilitate the use of mass transit, thereby reducing vehicle trips and miles travelled. The increase in transit accessibility and the bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project is also located in Downtown Long Beach, which would promote walking while reducing vehicle trips to and from the Project Site. The Project would also

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[17] *Fehr & Peers, 100 E. Ocean Boulevard Transportation Impact Analysis, January 2019. Refer to Appendix E.1 of this Draft EIR.*

provide pedestrian access to minimize barriers and link the Project Site with existing streets to encourage people to walk instead of drive.

As shown in Table IV.C-5 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, Project GHG emissions from mobile sources would result in a total of 2,060 $MTCO_2e$ per year, which accounts for a 61-percent reduction in mobile source emissions when taking into account the Project's specific characteristics, including the measures accounted for in the Traffic Study. The Project's mobile source GHG emissions inventory also takes into account CAPCOA measures which reduce VMT generated by the Project. CAPCOA has developed methodology to calculate the reduction in Project-generated VMT resulting from measures such as locating the Project near job centers, availability of mass transit stations, high density development and improved pedestrian access. The measures included in both the traffic study and CAPCOA VMT reducing measures would result in a 61-percent reduction in mobile source GHG emissions. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

(d) Stationary Source Emissions

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated that the Project would include an emergency generator on-site. As shown in Table IV.C-5, the Project scenario is expected to result in a total of 1 $MTCO_2e$ per year from stationary sources.

(e) Solid Waste Generation Emissions

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each proposed land use were selected for this analysis. As shown in Table IV.C-5, Project GHG emissions associated with solid waste generation would result in a total of 64 $MTCO_2e$ per year, which accounts for a 69-percent recycling/diversion rate consistent with the current diversion rate within the City of Long Beach.

(f) Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water, including: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used to treat the resulting wastewater and, in some areas, reuse it as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor to determine the embodied energy necessary to supply potable water.[18] The second step in calculating the water and wastewater-related GHG emissions is to multiply the amount of associated electricity consumed by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for SCE were selected in CalEEMod.

As shown in Table IV.C-5 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, the Project is expected to result in 80 $MTCO_2e$, which would represent a reduction of approximately 18 percent in comparison to a Project without Reduction Measures.

(3) Combined Construction and Operational Impacts

As shown in Table IV.C-5, when taking into consideration implementation of the Project's GHG reducing measures provided throughout this Draft EIR, including the requirements set forth in the City of Long Beach Green Building Ordinance and the full implementation of current state mandates, the GHG emissions associated with the Project would equal 64 $MTCO_2e$ per year during construction and 4,220 $MTCO_2e$ per year during operation, for a combined total of 4,284 $MTCO_2e$ per year. The Project's emissions of 4,284 MTCO2e would be approximately 45 percent below the emissions that would be generated by the Project without implementation of GHG reducing features and strategies.

(4) Consistency with Applicable Plans and Policies

A significant impact would occur if the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment by conflicting with applicable regulatory plans and policies to reduce GHG emissions, as discussed within CARB's Scoping Plan and subsequent updates, SCAG's 2016–2040 RTP/SCS, and the City's Sustainable City Action Plan. The following section describes the extent to which the Project complies with or exceeds the performance-based standards outlined in these plans. As shown herein, the Project would be consistent with the applicable GHG reduction plans and policies.

[18] *The intensity factor reflects the average pounds of CO_2e per megawatt generated by a utility company.*

(a) Climate Change Scoping Plan

As shown in Table IV.C-5 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, the Project would result in 4,284 $MTCO_2e$ annually. The breakdown of emissions by source category shows approximately less than 1 percent from area sources; 47 percent from energy consumption; 48 percent from mobile sources; less than 1 percent from stationary sources; 1.5 percent from solid waste generation; 2 percent from water supply, treatment, and distribution; and 1.5 percent from construction activities.

Table IV.C-6 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR provides an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Project would be consistent with or exceed the reduction actions/strategies outlined in the 2008 Climate Change Scoping Plan and First Update.[19] As discussed therein, the Project would be consistent with the GHG reduction-related actions and strategies of these plans.

The 2017 Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the 2008 Climate Change Scoping Plan and First Update shown in Table IV.C-6 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. A summary of these policies and measures is provided in Table IV.C-7 therein. Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets.

Based on the analysis herein, the Project would be consistent with the GHG reduction-related actions and strategies in the 2008 Climate Change Scoping Plan and subsequent updates, and related impacts regarding consistency with these plans would be less than significant.

(b) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy

As previously discussed, the purpose of SB 375 is to implement the State's GHG emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel. Under SB 375, the primary goal of the 2016–2040 RTP/SCS is to provide a framework for future growth that will decrease per capita GHG emissions from cars and light-duty trucks based on land use planning and transportation options. To

[19] *CARB, 2014 Update, May 2014, p. 4.*

accomplish this goal, the 2016–2040 RTP/SCS identifies various strategies to reduce per capita VMT.

The 2016–2040 RTP/SCS is expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita passenger vehicle GHG emissions of 9 percent by 2020 and 16 percent by 2035.[20] Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016–2040 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.[21] The 2016–2040 RTP/SCS would result in an estimated 8-percent decrease in per capita passenger vehicle GHG emissions by 2020, an 18-percent decrease in per capita passenger vehicle GHG emissions by 2035, and a 21-percent decrease in per capita passenger vehicle GHG emissions by 2040.[22] By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an approximately 21-percent decrease in per capita passenger vehicle GHG emissions by 2040 (an additional 3-percent reduction in the five years between 2035 [19 percent] and 2040 [21 percent]), the 2016–2040 RTP/SCS is expected to fulfill and exceed the SCAG region's portion of SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

In March 2018, CARB updated the SB 375 targets to require an 8-percent reduction by 2020 and a 19-percent decrease in VMT for the SCAG region by 2035.[23] As these reduction targets were updated after the 2016–2040 RTP/SCS was published, it is expected that the next iteration of the RTP/SCS will be updated to include these targets. Accordingly, the 2016–2040 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016–2040 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2016–2040 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use.

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[20] *CARB, Regional Greenhouse Gas Emission Reduction Targets Pursuant to SB 375, Resolution 10-31.*

[21] *SCAG, 2016–2040 RTP/SCS, April 2016, p. 153.*

[22] *SCAG, 2016–2040 RTP/SCS, April 2016, p. 8.*

[23] *CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets (2018).*

With regard to individual developments, such as the Project, the strategies and policies set forth in the 2016–2040 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency. The Project's consistency with these general categories of strategies and policies are each discussed below.

(i) Consistency with Integrated Growth Forecast

The 2016–2040 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. According to the 2016–2040 RTP/SCS, the employment forecast for the City of Long Beach Subregion in 2018 is approximately 174,448 employees.[24] In 2022, the projected occupancy year of the Project, the City of Long Beach Subregion is anticipated to have approximately 176,917 employees.[25] Thus, the Project's estimated 588 net new employees would constitute approximately 0.3 percent of the Subregion's employment forecasted in 2022.[26] Accordingly, the Project's employment generation would be consistent with the employment projections contained in the 2016–2040 RTP/SCS.

(ii) Consistency with VMT Reduction Strategies and Policies

As previously discussed and detailed in Appendix B of the Draft EIR, the Project's design includes characteristics that would reduce trips and VMT within the Air Basin as compared to the Project without implementation of VMT reducing measures as measured by CalEEMod. These relative reductions in vehicle trips and VMT help quantify the GHG emissions reductions achieved by locating the Project in an infill area and HQTA that promotes alternative modes of transportation. Specifically, the Project characteristics listed below are consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*, which identifies the VMT and vehicle trips reductions for the Project Site relative to the standard trip and VMT rates in CalEEMod and which corresponds to a reduction in relative GHG emissions.[27] Measures applicable to the Project include the following; a brief description of the Project's relevance to the measure is also provided:

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[24] *Based on a linear interpolation of 2012–2040 data.*

[25] *Based on a linear interpolation of 2012–2040 data.*

[26] *Long Beach Unified School District, Commercial/Industrial Development School Fee Justification Study, March 7, 2018, Table 4.*

[27] *CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, 2010.*

- **CAPCOA Measure LUT-1—Increase Density:** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies, such as enhanced transit services. The Project would increase the site density from 0 jobs per acre to approximately 440 jobs per acre.

- **CAPCOA Measure LUT-4—Increase Destination Accessibility:** The Project Site is located in Downtown Long Beach. Access to the Downtown Long Beach employment center would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reductions in transportation-related emissions as a result of the Project.

- **CAPCOA Measure LUT-5—Increase Transit Accessibility:** The Project would be located within 0.15 mile of the Metro Blue Line Downtown Long Beach station. The Project would also provide adequate bicycle parking spaces for guest and commercial uses to encourage utilization of alternative modes of transportation.

- **CAPCOA Measure SDT-1—Provide Pedestrian Network Improvements:** The Project would provide pedestrian access that minimizes barriers and links the Project Site with existing or planned external streets to encourage people to walk instead of drive. The Project would provide direct access to the existing off-site pedestrian network including existing off-site sidewalks, to encourage and increase pedestrian activities in the area, which would further reduce VMT and associated transportation-related emissions.

- **CAPCOA Measure SDT-2—Traffic Calming Measures:** The Project would provide traffic calming measures to encourage people to walk or bike instead of using a vehicle, including the introduction of several signalized intersections. This mode shift results in a decrease in VMT. Over 75 percent of streets within 0.5 mile of the Project Site include sidewalks with crosswalks.

As shown in Appendix B, the Project would result in an approximately 61-percent reduction in GHG emissions from mobile sources and would therefore be consistent with the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS. This reduction is attributable to the Project characteristics of being an infill project near transit that supports multi-modal transportation options.

The Project would also be consistent with the following key GHG reduction strategies in SCAG's 2016–2040 RTP/SCS, which are based on changing the region's land use and travel patterns:

- Compact growth in areas accessible to transit;

- Jobs closer to transit;
- Job growth focused in HQTAs; and
- Biking and walking infrastructure to improve active transportation options and transit access.

The Project represents an infill development within an urbanized area that would concentrate new hotel and restaurant uses within an HQTA, which is defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. In the Project vicinity, the Metro Blue Line Downtown Long Beach station is located approximately 0.15 miles from the Project Site. Public bus transit service in the vicinity of the Project Site is provided by Metro and Long Beach Transit, with 11 bus lines serving the area. The Project would also provide bicycle storage areas for hotel guests and visitors, and the existing Long Beach Bike Share station located on-site would remain. The Project would thus provide hotel guests and visitors with convenient access to public transit and opportunities for walking and biking, which would facilitate a reduction in VMT and related vehicular GHG emissions, which would be consistent with the goals of SCAG's 2016–2040 RTP/SCS.

(iii) Increased Use of Alternative Fueled Vehicles Policy Initiative

The second goal of the 2016–2040 RTP/SCS, with regard to individual development projects such as the Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. This 2016–2040 RTP/SCS policy initiative focuses on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. The Project would implement a TDM Program which would include strategies to promote non-auto travel and reduce the use of single-occupant vehicle trips. Such TDM measures would include providing for bicycle parking, showers and lockers; rideshare parking spaces; wider sidewalks and lighting to encourage walking; and the display of information (signage) to promote the use of alternative transportation. Therefore, the Project would be consistent with the 2016–2040 RTP/SCS.

(iv) Energy Efficiency Strategies and Policies

The third important focus within the 2016–2040 RTP/SCS for individual developments such as the Project involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2016–2040 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. The Project's building design would incorporate a number of sustainability features capable of LEED Silver® certification, including energy efficiency measures that meet or exceed Title

24 energy efficiency requirements, installation of efficient HVAC mechanical systems, use of LED lighting or other energy-efficient lighting technologies, etc., thus reducing overall energy usage compared to baseline conditions. Projects pursuing LEED certification must earn points by implementing sustainability measures such as reducing energy and water usage, reducing waste, increasing recycling, and providing indoor environmental comfort. As LEED certification is based on a point system, multiple paths may be taken to achieve Silver® certification. At this time, it is not known which points will be selected to achieve LEED Silver®, but Project energy usage will meet or exceed Title 24 energy efficiency requirements. Accordingly, the Project would be consistent with the 2016–2040 RTP/SCS energy efficiency strategies and policies.

In sum, the Project is the type of land use development that is encouraged by the RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies.[28] By furthering implementation of SB 375, the Project would support regional land use and transportation GHG reductions consistent with state regulatory requirements.

Therefore, the Project would be consistent with the GHG reduction-related actions and strategies contained in the 2016–2040 RTP/SCS. Overall, the Project would not conflict with the 2016–2040 RTP/SCS, which is intended to reduce GHG emissions.

(c) Sustainable City Action Plan

The Project would be consistent with the City of Long Beach Sustainable City Action Plan. The plan is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. The Sustainable City Action Plan includes measurable goals and actions that are intended to be challenging, yet realistic. Table IV.C-8 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, provides a discussion of the Project's consistency with applicable GHG-reducing actions from the Sustainable City Action Plan. As discussed therein, the Project would be consistent with the applicable goals and actions of the Sustainable City Action Plan.

(d) Conclusion

The Project would be consistent with the emission reduction measures discussed within CARB's 2008 Climate Change Scoping Plan and subsequent updates, particularly

[28] *SB 375 legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32.*

their emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. In addition, as recommended by CARB's 2008 Climate Change Scoping Plan and subsequent updates, the Project would incorporate "green building" features consistent with the CalGreen Building Code.

As part of SCAG's 2016–2040 RTP/SCS, a reduction in VMT within the region is a key component to achieve the 2020 and 2035 GHG emission reduction targets established by CARB. The Project would result in a VMT reduction of approximately 67 percent as a result of various site characteristics, including the close proximity to transit, consistent with SCAG's 2016–2040 RTP/SCS. Thus, given the Project's consistency with state, SCAG, and City of Long Beach GHG emission reduction goals and objectives, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. In the absence of adopted standards and established significance thresholds, and given this regulatory consistency, it is concluded that the Project's impacts with respect to GHG emissions would be less than significant and would not be cumulatively considerable.

(5) Post-2030 Analysis

Recent studies show that the State's existing and proposed regulatory framework will put California on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[29] Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which requires the state board to ensure statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. The new plan outlined in SB 32 involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The Project's design features would advance these goals by reducing VMT, increasing the use of electric vehicles, improving energy efficiency, and reducing water usage.

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[29] *CARB, 2017 Update, November 2017, p. 18.*

The emissions modeling in the 2017 Update has projected 2030 statewide emissions which take into account known commitments (reduction measures) such as SB 375, SB 350, and other measures. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments will not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Update assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project would be consistent with the 2017 Update, additional measures to achieve the 2030 targets and beyond are outside of the City or the Project's control. Therefore, any quantified evaluation of post-2030 Project emissions would be speculative. Regardless, the discussion herein is provided for information purposes.

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. Nonetheless, studies have shown that in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." In the First Update, however, CARB generally described the type of activities required to achieve the 2050 target as "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately."[30]

Although the Project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the Project's emissions level (4,284 metric tons of CO_2e per year) to decline as the regulatory initiatives identified by CARB in the First Update are implemented and as other technological innovations occur. Stated differently, the Project's total emissions at build out presented in Table IV.C-5 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project would be consistent with the Executive Order's horizon-year (2050) goal. Further, the Project's consistency with SCAG's RTP/SCS demonstrates that the Project would be consistent with post-2030 GHG reduction

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[30] *CARB, 2017 Update, November 2017, p. 18.*

goals. The 2016–2040 RTP/SCS would result in an estimated 8-percent decrease in per capita passenger vehicle GHG emissions by 2020, a 18-percent decrease in per capita passenger vehicle GHG emissions by 2035, and a 21-percent decrease in per capita passenger vehicle GHG emissions by 2040. In March 2018, CARB adopted updated targets requiring a 19-percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016–2040 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. Thus, the 2016–2040 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

The Project is the type of land use development that is encouraged by the 2016–2040 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies. The Project would result in a VMT reduction of approximately 67 percent in comparison to a Project without Reduction Measures as estimated by CalEEMod and a 61-percent reduction in GHG emissions from mobile sources, which would be consistent with the reduction in transportation emissions per capita provided in the 2016–2040 RTP/SCS and the updated SB 375 targets. By furthering implementation of SB 375, the Project would support regional land use and transportation GHG reductions consistent with state climate targets for 2020 and beyond.

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

b. Cumulative Impacts

As previously explained, the analysis of a project's GHG emissions is inherently cumulative in nature because climate change is a global problem and the emissions from any single project are typically negligible. Accordingly, the analysis herein takes into account the potential for the Project to contribute to the cumulative impact of global climate change. Table IV.C-5 in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, illustrates that implementation of the Project's design, sustainability, site, and land use characteristics, combined with compliance with regulatory requirements, including state mandates, would contribute to suitable GHG reductions. Although, the Project's net GHG emissions are greater than the 2008 draft screening level from SCAQMD, the Project's emissions profile would be consistent the State's goals. The analysis shows that the Project would consistent with CARB's 2008 Climate Change Scoping Plan and subsequent updates, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. The analysis also shows that the Project would be consistent with the 2016–2040 RTP/SCS plans, policies, and regulatory requirements to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. In addition, the Project would comply with the City of Long Beach Sustainable City Action Plan, which is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. Given the Project's consistency with statewide, regional, and local plans adopted for the reduction of GHG emissions, it is concluded that the Project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable. For these reasons, the Project's cumulative contribution to global climate change would be less than significant.

c. Project Design Features

As discussed in Section II, Project Description, of this Draft EIR, the Project incorporates features to support and promote environmental sustainability. "Green" principles have been incorporated in the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013) and the Project has been designed to achieve the U.S. Green Building Council's LEED Silver® certification. Specific energy conservation, water conservation, and waste reduction features include, but are not limited to, the following:

Project Design Feature GHG-1: The design of the new buildings shall incorporate features of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) program to be capable of meeting the standards of LEED Silver® or equivalent green building standards under LEED v4. Specific sustainability features that are integrated into the Project design to enable the Project to achieve LEED Silver® certification will include, but are not limited to the following:

a. Meeting or exceeding Title 24, Part 6, California Energy Code baseline standard requirements by 10 percent for energy efficiency, based on the 2016 Building Energy Efficiency Standards requirements.

b. Use of Energy Star–labeled products and appliances.

c. Use of light-emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use.

d. Use of high-efficiency Energy Star–rated dishwashers and clothes washers where appropriate.

e. Incorporation of generous operable windows and high performance window glazing; and use of natural light.

f. Provision of conduit that is appropriate for future photovoltaic and solar thermal collectors.

g. Installation of a separate water meter (or submeter), flow sensor, and master valve shutoff for irrigated landscape areas totaling 5,000 square feet and greater.

h. Provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied.

i. Use of building materials with a minimum of 10 percent recycled-content for the construction of the Project.

j. Water-efficient plantings with drought-tolerant species; and

k. Pedestrian- and bicycle-friendly design with short-term and long-term bicycle parking.

Also refer to Project Design Feature TRA-2 detailed in Section IV.E, Transportation/ Traffic, of this Draft EIR which describes the Transportation Demand Management (TDM) Program proposed as part of the Project. TDM measures would include bicycle parking, bicycle rental, an active transportation-oriented ground floor, wayfinding signage, end-of-trip bicycle facilities, car share parking, car share membership, a guaranteed ride home program, pre-loaded transit cards/bike share passes, unbundled parking, hotel confirmation with multi-modal information, and in-room transportation options.

In addition, the Project would include a stormwater capture and reuse system designed to accommodate up to 3,102 cubic feet of stormwater and a flow rate of up to 0.28 cubic foot per second. This system would include underground steel reinforced polyethylene detention tanks with an irrigation reuse pump. The detention system would retain stormwater until it reaches the overflow pipe that connects to the existing storm drain system. The treated stormwater may be used for on-site irrigation, which would reduce water demand.

d. Mitigation Measures

With implementation of the Project's design, sustainability, site, and land use characteristics, combined with compliance with regulatory requirements, impacts related to GHG emissions would be less than significant.

e. Level of Significance After Mitigation

Project impacts related to GHG emissions would be less than significant.

D. Noise

a. Analysis of Project Impacts

(1) Construction Noise

The Project would involve demolition of the existing surface parking lot and construction of a hotel, restaurant, meeting spaces, and associated parking. Construction activities would include demolition, excavation, building construction, architectural coatings and paving. Construction would take place over approximately 30 months, anticipated to begin in early-2020, with completion in 2022. During construction, a variety of heavy-duty diesel powered equipment would be used on-site. Building construction and finishing activities will require equipment such as excavators, drill rigs, cranes, concrete pumps, and air compressors. Construction would require demolition of the asphalt parking lot and retaining walls and approximately 23,500 cubic yards of soil removal and export.

During construction, regional access to and from the Project Site for construction trucks associated with hauling and deliveries would be provided via the I-710 freeway. It is anticipated that construction worker traffic would utilize both regional and local roadways to travel to and from the Project Site, including Shoreline Drive and Pine Avenue.

(a) On-Site Construction Noise

Noise impacts from Project construction activities occurring within or adjacent to the Project Site would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise sensitive receptors. Construction activities would generally include demolition, site grading, and building construction. Each stage of construction would involve the use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. Demolition generally involves the use of backhoes, front-end loaders, and heavy-duty trucks. Grading typically requires the use of earth moving equipment, such as excavators, front-end loaders, and heavy-duty trucks. Building construction typically involves the use of cranes, forklifts, concrete trucks, and delivery trucks. Noise from construction equipment would generate both steady-state and episodic noise that could be heard within and adjacent to the Project Site.

Individual pieces of construction equipment that would be used for Project construction produce maximum noise levels (L_{max}) of 74 dBA to 90 dBA at a reference distance of 50 feet from the noise source, as shown in Table IV.D-7 in Section IV.D, Noise, of this Draft EIR. These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites often operates under less than full power conditions, or partial power. To more accurately characterize construction-period noise levels, the average (hourly L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage.[31] These noise levels are typically associated with multiple pieces of equipment operating simultaneously.

Table IV.D-8 in Section IV.D, Noise, of this Draft EIR provides the estimated construction noise levels for various construction stages at the off-site noise sensitive receptors. The estimated noise levels represent a worst-case scenario in which all construction equipment was assumed to operate simultaneously and assumed to be located at the construction area nearest to the affected receptors. These assumptions are considered conservative as construction activities would typically be spread throughout the entire site, with much of the construction equipment located further away from the affected receptors, and all on-site equipment typically would not be operated concurrently. As indicated in Table IV.D-8, the estimated construction-related noise levels would be below the significance threshold of 5 dBA over ambient levels at all sensitive receptor locations. The analysis assumes that construction equipment would be equipped with standard noise mufflers and noise shielding to reduce noise. Construction activities also would comply with the City of Long Beach Noise Ordinance Chapter 8.80.202, which restricts construction and demolition activities to the hours of 7:00 A.M. to 6:00 P.M. Monday through Friday, and 8:00 A.M. to 6:00 P.M. on Saturday. Therefore, temporary noise impacts associated with the Project's on-site construction activities would be less than significant.

(b) Off-Site Construction Noise

In addition to on-site construction noise sources, a variety of mobile sources including materials delivery, concrete mixing, haul trucks (construction trucks), and construction worker vehicles would require access to the Project Site during the Project construction period. The major noise sources associated with off-site construction trucks would be from delivery/haul trucks. The peak period of construction trucks would be during the mat foundation (concrete pour) phase, when there would be up to a maximum of 415 concrete trucks (415 inbound trips and 415 outbound trips) per day. There would be fewer construction-related trucks during other construction phases, with up to 85 delivery trucks per day. Therefore, the noise analysis is based on the peak period (i.e., the site grading phase), with a maximum of 415 trucks per day (830 total one-way trips). Based on an 8-hour daily haul period and a uniform distribution of trips, there would be an average of approximately 52 trucks (52 inbound trips and 52 outbound trips) per hour. Inbound haul

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31 *Pursuant to the FHWA Roadway Construction Noise Model User's Guide, 2006, the usage factor is the percentage of time during a construction noise operation that a piece of construction is operating at full power.*

trucks would generally arrive at the Project Site via I-710, West Shoreline Drive, and Pine Avenue. Outbound haul trucks would exit the site onto Pine Avenue, travel west along Ocean Boulevard, and north along West Shoreline Drive to I-710. During the mat foundation concrete pour phase, trucks may operate during nighttime hours (7 P.M.–7 A.M.) in order to avoid traffic impacts during daytime hours. Although the City of Long Beach generally does not allow construction activities after 7 P.M., the City's Health Department Noise Control Officer may grant a permit allowing work beyond 7 P.M. All other phases of construction would comply with the LBMC regarding construction hours.

The off-site construction truck noise impacts were analyzed using the FHWA's TeNS model. Noise generated by construction trucks along the anticipated haul route would be approximately 71.7 dBA (hourly L_{eq}), which would be below the significance threshold of 5 dBA above ambient levels measured at Receptor R5 along Ocean Boulevard for both daytime and nighttime hours.

As such, significant noise impacts would not be expected from off-site construction traffic, and no mitigation measures are required.

(2) Construction Vibration

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receptor buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels to low rumbling sounds and perceptible vibration at moderate levels. However, ground-borne vibrations from construction activities rarely reach levels that damage structures.

The Project would generate ground-borne construction vibration during site demolition and excavation/grading activities when heavy construction equipment, such as large bulldozers, is used. The FTA has published standard vibration velocities for various construction equipment operations. The typical vibration levels (in terms of inches per second PPV) at a reference distance of 25 feet for construction equipment anticipated to be used during Project construction are listed in Table IV.D-9 in Section IV.D, Noise, of this Draft EIR.[32] In accordance with Project Design Feature NOI-2, Project construction would not

[32] *FTA, Transit Noise and Vibration Impact Assessment, May 2006.*

use impact pile driving methods, and as such, impact pile driving vibration is not included in this construction vibration analysis.

Table IV.D-9 provides the estimated vibration velocity levels at the off-site structures nearest to the Project construction area. As indicated therein, vibration velocities from typical heavy construction equipment operations that would be used during construction of the Project would range from 0.003 to 0.089 PPV at 25 feet from the equipment. The Ocean Center building is located approximately 50 feet to the west of the site would experience vibration velocities up to 0.042 PPV. The Breakers Building is located 250 feet to the east of the site and would experience vibration levels of less than 0.019 PPV. The estimated vibration velocity levels (from all construction equipment) would be well below the significance thresholds of 0.3 PPV, applicable to the commercial buildings surrounding the Project Site. Therefore, vibration impacts associated with potential building damage during construction activities would be less than significant.

Vibration levels generated by construction equipment would range from 0.003 to 0.089 PPV (or 58 to 87 VdB) at a distance of 25 feet from the construction equipment. With regard to human annoyance, the nearest off-site residential use is approximately 450 feet from the Project Site. At a distance of 450 feet, the vibration level from the Project construction area would be attenuated to a maximum of 59 VdB at the nearest off-site residential use (Receptor R1). The estimated vibration level at Receptor R1 would be well below the 75 VdB significance threshold. Therefore, temporary vibration impacts related to human annoyance during the construction period would be less than significant.

Construction trucks would generate ground-borne vibration as they travel along the Project designated haul route. Thus, an analysis of potential vibration impacts associated with building damage and human annoyance from ground-borne vibration along the local haul route was conducted. Based on FTA data, the vibration generated by a typical truck would be approximately 63 VdB (0.006 PPV) at a distance of 50 feet from the truck.[33] There are existing buildings along the Project's haul route approximately 25 feet from the roadway and that would be exposed to ground-borne vibration levels of approximately 0.016 PPV or 72 VdB. The estimated vibration generated by haul trucks along the haul route would be well below the most stringent building damage threshold of 0.12 PPV for buildings extremely susceptible to vibration. Residential uses at receptor R5 are located approximately 100 feet from the primary construction haul route. Based on a distance of 100 feet, these residential uses would experience vibration levels of 50 VdB (0.0013 PPV) due to haul truck activity, which is well below the 0.2 PPV significance threshold for building damage and below the 75 VdB threshold for human annoyance. Therefore, potential

[33] *FTA, Transit Noise and Vibration Impact Assessment, May 2006, Figure 7-3.*

impacts associated with vibration from haul trucks traveling along the designated haul route would be less than significant.

Although Project-related construction vibration impacts to occupied buildings (residential, commercial) would be less than significant, a historic structure, the subterranean Jergins Trust Tunnel, is located adjacent to the Project Site. The Jergins Trust Tunnel is an underground pedestrian walkway located below Ocean Boulevard and Victory Park, just east of and parallel to Pine Avenue. The Jergins Trust Tunnel was declared a historic landmark in 2009. The tunnel is currently not visible from the street, nor is it open to the public.

As part of Project development, the Jergins Trust Tunnel would be reopened by connecting the proposed building to it at the lower level. A new entry lobby would be constructed adjacent to the tunnel, and the tunnel would be cleaned, stabilized, and improved to allow public access. Vibration from these construction activities would have the potential to damage the tunnel. As discussed earlier in Section IV.B, Cultural Resources, of this Draft EIR, Mitigation Measure HIS-2 would require active vibration monitoring within the tunnel throughout Project construction. Furthermore, all work within the Jergins Trust Tunnel would meet the Secretary of the Interior's Standards. CEQA Guidelines Section 15064.5 states: "Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings … shall be considered as mitigated to a level of less than a significant impact on the historical resource." Therefore, with implementation of Mitigation Measure HIS-2 and compliance with the Secretary of the Interior's Standards, construction-related vibration impacts affecting the Jergins Trust Tunnel would be reduced to a less than significant level.

(3) Operational Noise

This section provides a discussion of potential operational noise impacts on nearby noise-sensitive receptors. Specific operational noise sources addressed herein include: (a) on-site stationary noise sources, which consist of outdoor mechanical equipment (i.e., rooftop condenser units), activities associated with the outdoor spaces, and parking facilities; and (b) off-site mobile (roadway traffic) noise sources.

(a) On-Site Stationary Noise Sources

(i) Mechanical Equipment

The operation of mechanical equipment such as air conditioners, fans, and related equipment may generate audible noise levels. However, the Project's mechanical equipment would be located on the building's rooftop or in the interior of the building, shielded from nearby land uses to attenuate noise. In addition, all mechanical equipment would be designed with appropriate noise control devices, such as sound screen/parapet walls, to comply with the noise limitation requirements set forth in LBMC, which limits the noise from air conditioning equipment to 55 dBA at the property line.

The nearest off-site sensitive use, the hotel north of the Project Site (Receptor R2), is located approximately 200 feet away, and the closest residential uses are to the west (Receptor R1), approximately 450 feet from the Project Site. Given the location of these uses, noise from the Project's mechanical equipment would be reduced to below the existing nighttime ambient noise levels shown in Table IV.D-6 in Section IV.D, Noise, of this Draft EIR, due to distance attenuation. This analysis is considered conservative because it is based on distance alone and no noise control devices are assumed. Therefore, noise impacts from mechanical equipment would be less than significant.

(ii) Outdoor Spaces

The Project includes various outdoor spaces, including: an outdoor patio area and a variety of amenities for hotel guests and visitors including an 11,288-square-foot pool deck and bar. A restaurant and an outdoor patio would be located on Level 3, wrapping around the north, west, and south sides of the building. Atop the podium, Level 6 would include various outdoor hotel amenities including a pool, spa, and planted areas. Level 7 would include an outdoor planted area along the building's eastern side. Levels 26 through 29 would include balconies, and an outdoor seating area with landscaping associated with the proposed restaurant would be located on Level 30.

Noise associated with the outdoor spaces would include people talking and potential background music (i.e., amplified sound). An amplified sound system would possibly be used at the outdoor patio area (Level 3), the pool deck and bar (Level 6), and the rooftop.

To evaluate noise from people talking, reference noise levels of 65 dBA and 62 dBA (L_{eq} at a 3.3-foot distance) for a male and female, respectively, speaking in raised voice levels were used for analyzing noise from the use of these areas.[34] In order to analyze a typical noise scenario, it was assumed that up to 50 percent of the people (half of which would be male and the other half female) would be talking at the same time. With regard to amplified sound, the possible sound system would be intended to provide sufficient loudness to be heard by people in the immediate vicinity of the outdoor patios and pool

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34 *Harris, Cyril M., Handbook of Acoustical Measurements and Noise Control, Third Edition, 1991, Table 16.1.*

deck. For the noise analysis, the amplified program sound system was assumed to have a maximum noise level of 75 and 90 dBA L_{eq} at a distance of 15 feet from the speaker locations at the outdoor patio and the pool deck/rooftop, respectively, ensuring that the amplified program sound would not exceed the significance threshold (i.e., an increase of 5 dBA L_{eq}) at any off-site noise-sensitive receptor.

Table IV.D-10 in Section IV.D, Noise, of the Draft EIR, presents the estimated noise levels associated with use of the outdoor spaces at the off-site sensitive receptors within 500 feet of the site.[35] As indicated therein, the estimated noise levels at all off-site receptors would be below the significance threshold of 5 dBA (L_{eq}) above ambient noise levels. As such, noise impacts from use of the outdoor spaces would be less than significant, and no mitigation measures are required.

(iii) Parking Facilities

The Project would provide 151 on-site parking spaces, which would be located within a one subterranean parking level and a partial at-grade parking level. Noise generated within the subterranean parking level would be effectively shielded from the off-site sensitive receptors, since the subterranean parking level would be fully enclosed. The partial at-grade parking level would be mostly enclosed, with openings limited to the garage driveways.

The Project would also include 280 off-site valet parking spaces at the existing Terrace Theater Parking Garage, located approximately 0.2 mile southeast of the Project site. This lot would be used to handle overflow parking during peak demand. Noise from on-site and off-site parking lots would be regulated by LBMC Chapter 8.80, which limits noise generated by motor vehicles within Project parking facilities.

As all visitors will be required to valet their vehicle, valet trips were accounted for in the trip distribution and assignment analysis for the Project Traffic Study, included as Appendix E.1 of this Draft EIR. Valet trips are expected to make a right turn on to eastbound Ocean Boulevard followed by a right at Locust Avenue or Collins Way to access Seaside Way and enter either the on- or off-site parking garage. As discussed below, noise levels due to Project-related vehicle trips along Ocean Boulevard and Seaside Way would not exceed significance thresholds. Therefore, noise impacts associated with on and off-site parking facilities would be less than significant, and no mitigation measures are required.

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[35] *Analysis includes receptors within 500 feet of the Project Site. As other receptors are located farther away, noise impacts at other receptors would be less than the values presented in the table.*

(iv) Loading Dock/Trash Collection Areas

The loading dock and trash compactor for the Project would be provided at south east corner of the Project Site and would be shielded from off-site sensitive receptors. Delivery trucks and trash collection trucks would access the loading dock and trash compactor from Seaside Way. The existing parking structure east of the site would provide shielding from loading activities and trash compactor noise and would not exceed the ambient noise level by more than 5 dBA. Table IV.D-11 in Section IV.D, Noise, of this Draft EIR presents the estimated noise levels from loading dock and trash compactor operations at the off-site receptors. As indicated therein, the estimated noise levels at both off-site As indicated therein, the estimated noise levels at both off-site receptors would be below the significance threshold. Therefore, noise impacts from loading docks and trash compactor operations would be less than significant.

(b) Off-Site Traffic (Mobile Sources)

(i) Future Plus Project

Prior to any reductions for pass-by trips or internal capture, the Project is expected to generate a total of 6,224 daily trips, based on the Project's Traffic Study included in Appendix E.1 of this Draft EIR.[36] Project-generated traffic noise impacts were evaluated by comparing the increase in noise levels from the "future without project" condition to the "future with project" condition with the Project's significance threshold. In addition, potential mobile noise impacts were also evaluated by comparing Project-related traffic with the existing baseline traffic noise conditions as a conservative analysis. The cumulative noise impacts due to off-site traffic were analyzed by comparing the projected increase in traffic noise levels from existing conditions to "future with project" conditions to the Project's significance criteria. Traffic noise levels at the off-site noise sensitive receptors were calculated using FHWA's TeNS Model and the Project's traffic volume data. The traffic noise impact analysis is based on the 24-hour CNEL noise descriptor.

Table IV.D-12 in Section IV.D, Noise, of this Draft EIR, provides a summary of the off-site roadway noise impact analysis. The calculated CNEL levels are conservative as they are calculated in front of the roadways and do not account for the presence of any physical sound barriers or intervening structures. As shown in Table IV.D-12, traffic from the Project would result in an increase in noise levels of up to 2.1 dBA along Seaside Way as compared to the future conditions without Project. However, Project-related traffic would result in a minimal increase in noise levels at other study roadway segments in the

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[36] *Fehr & Peers, 100 E. Ocean Boulevard Transportation Impact Analysis, Long Beach, California, September 28, 2018.*

Project vicinity. The cumulative traffic volumes would likewise result in a maximum increase of 2.2 dBA CNEL along Seaside Way, east of Pine Avenue. Typically, a minimum 3 dBA change in the noise environment (increase and/or decrease) is considered the threshold of human perception, and thus these noise increases generally would not be perceptible. The estimated noise increases also would be below the more stringent 3 dBA significance threshold (applicable when noise levels fall within the normally unacceptable category) under both existing and future scenarios. Therefore, off-site traffic noise impacts associated with the Project would be less than significant, and no mitigation measures are required.

(ii) Existing Plus Project

The analysis of off-site traffic noise impacts was based on the incremental increase in traffic noise levels attributable to future with Project conditions as compared to future without the Project conditions. Additional analysis was conducted to determine the potential noise impacts based on the increase in noise levels due to Project-related traffic compared with the existing baseline traffic noise conditions.

As shown in Table IV.D-12, under Project Existing Impacts, the Project would result in a maximum 2.2 dBA (CNEL) increase in traffic-related noise levels along Seaside Way east of Pine Avenue. The estimated increase in off-site traffic noise levels as compared to existing conditions would be well below the 3-dBA CNEL significance threshold. Therefore, off-site traffic noise impacts associated with Existing Plus Project Conditions would be less than significant.

(c) Composite Noise Level Impacts from Project Operations

In addition to considering the potential noise impacts to neighboring noise-sensitive receptors from each specific off-site and on-site noise source (e.g., traffic, mechanical equipment, and outdoor areas), an evaluation of the potential composite noise level increase (i.e., noise levels from all noise sources combined) at the analyzed sensitive receptor locations was also performed. This evaluation of composite noise levels was completed using the CNEL noise metric. Table IV.D-13 in Section IV.D, Noise, of this Draft EIR, presents the estimated composite noise levels in terms of CNEL at the off-site receptors. As indicated therein, the Project would result in an increase of 1.9 dBA at the off-site residential use (Receptor R1), which would be below the more stringent 3-dBA significance threshold. Therefore, composite noise level impacts due to Project operations would be less than significant.

b. Cumulative Impacts

The Project together with the related projects and future growth could contribute to cumulative noise impacts. The potential for cumulative noise impacts to occur is specific to the distance between each related project and their respective stationary noise sources, as well as the cumulative traffic that these projects would add on the surrounding roadway network.

(1) Construction Noise and Vibration

As indicated in Section III, Environmental Setting, of this Draft EIR, 54 related projects have been identified in the vicinity of the Project Site. Noise from construction of development projects is typically localized and has the potential to affect noise-sensitive uses within 500 feet from the construction site. Thus, noise from construction activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for receptors located midway between the two construction sites. While the majority of the related projects are located a substantial distance (greater than 1,000 feet) from the Project Site, the following eight Related Projects 4, 7, 8, 25, 42, 45, and 48 are within 1,000 feet of the Project Site.

- Related Project No. 4 (207 Seaside Way) is a residential development located approximately 250 feet east of the Project Site. The Renaissance Hotel (noise sensitive receptor R2) is located within 500 feet of Related Project No. 4 and the Project Site. However, this related project is under construction and is anticipated to be completed prior to the start of the Project construction. Therefore, the Related Project No. 4 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 7 (110 W. Ocean Boulevard) is a residential development located approximately 80 feet west of the Project Site. Residential uses (noise sensitive receptor R1) is located within 500 feet of Related Project No. 7 and the Project Site. However, construction activities at this related project would maintain the existing structure and mainly involve interior work. In addition, the existing buildings at this related project would block the line of sight between the Project and sensitive receptor R1. Therefore, the Related Project No. 7 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 8 (150 W. Ocean Boulevard) is a residential development located approximately 180 feet west of the Project Site. Residential uses (noise sensitive receptor R1) is located within 500 feet of Related Project No. 8 and the Project Site. However, this related project is under construction and is anticipated to be completed prior to the start of the Project construction. Therefore, the Related Project No. 8 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 25 (107 Long Beach Boulevard) is a hotel development located approximately 750 feet northeast of the Project Site. The Renaissance Hotel (noise sensitive receptor R2) is located within 500 feet of Related Project No. 25 and the Project Site. However, this related project is under construction and is anticipated to be completed prior to the start of Project construction. Therefore, the Related Project No. 25 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 42 (110 Pine Avenue) is an adaptive reuse hotel development located approximately 550 feet north of the Project Site. The Renaissance Hotel (noise sensitive receptor R2) is located within 500 feet of Related Project No. 42 and the Project Site. This related project is currently under construction but timeline for completion is not known and could possibly overlap with construction of the Project. Therefore, construction noise impacts resulting from the Project and Related Project No. 42 would be cumulatively considerable and would be considered significant.

- Related Project No. 45 (210 E. Ocean Boulevard) is an adaptive reuse hotel development located approximately 475 feet west of the Project Site. Residential uses (noise sensitive receptor R1) is located within 500 feet of Related Project No. 48 and the Project Site. However, this related project is currently proposed and under review. It is uncertain when construction activities would start at this related Project and construction of this related project could possibly overlap with construction of the Project. Therefore, construction noise impacts resulting from the Project and Related Project No. 45 would be cumulatively considerable and would be considered significant.

- Related Project No. 48 (200 W. Ocean Boulevard) is an adaptive reuse residential development located approximately 250 feet east of the Project Site. The Renaissance Hotel (noise sensitive receptor R2) is located within 500 feet of Related Project No. 48 and the Project Site. However, construction activities at this related project are mainly to renovate the existing building and would involve interior work. In addition, existing buildings in the vicinity would block the line of sight between the Project and sensitive receptor R2. Therefore, the Related Project No. 48 would not contribute to cumulative construction-related noise impacts.

Based on the above, cumulative noise impacts at the nearby sensitive uses located between the Project Site and Related Project Nos. 42 and 45 could occur if construction of these related projects overlaps with Project construction. Construction-related noise levels from the related projects would be intermittent and temporary, and it is anticipated that, as with the Project, the related projects would comply with the construction hours and other relevant provisions set forth in the LBMC. Noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures for each individual related project and compliance with locally adopted and enforced noise ordinances. Nonetheless, if nearby Related Project No. 42 and 45 were to be constructed concurrently with the Project, significant cumulative construction noise impacts could result.

In addition to the cumulative impacts of on-site construction activities, off-site construction haul trucks would not likely result in a cumulative impact due as the haul route would not include sensitive uses. Inbound haul trucks would generally arrive at the Project Site via I-710, West Shoreline Drive, and Pine Avenue. Outbound haul trucks would exit the Project Site onto Pine Avenue, travel along Ocean Boulevard and north along West Shoreline Drive to I-710. Uses along this route include commercial uses which are not considered sensitive receptors. Therefore, cumulative noise due to construction truck traffic from the Project and other related projects would not exceed ambient noise levels along the haul route by 5 dBA at sensitive receptors. As previously discussed, ground-borne vibration decreases rapidly with distance. Potential vibration impacts due to construction activities are generally limited to buildings/structures located in close proximity of a construction site (i.e., within 50 feet). The nearest related project is approximately 100 feet from the Project. Therefore, due to the rapid attenuation characteristics of ground-borne vibration, there is no potential for a cumulative construction impact with respect to ground-borne vibration, and cumulative impacts would be less than significant.

(2) Long-Term Operations

The Project Site and surrounding area have been developed with uses that have previously generated and will continue to generate noise from a number of community noise sources, including vehicle travel, mechanical equipment (e.g., HVAC systems), outdoor activity areas, and intermittent lawn maintenance activities. Each of the related projects identified in the Project vicinity also would generate stationary-source and mobile-source noise due to ongoing day-to-day operations. Related Project Nos. 4, 7, 8, 45, 48, 42, and 25 include a limited amount of recreational, office, commercial/retail, restaurant, and hotel uses, which are not typically associated with excessive exterior noise levels.

Due to provisions set forth in the LBMC that limit stationary source noise from mechanical equipment, noise levels would be less than significant at the property line for each related project. In addition, with implementation of the proposed project design features presented earlier in this section, noise impacts associated with Project operations would be less than significant. Based on the distance of the related projects from the Project Site and the noise levels associated with the Project after implementation of the proposed project design features, cumulative stationary source noise impacts associated with operation of the Project and related projects would be less than significant. However, each project would produce traffic volumes that are capable of generating roadway noise impacts.

The Project combined with the related projects in the area would produce traffic (i.e., off-site mobile sources) that would generate roadway noise. Cumulative noise impacts due to off-site traffic were analyzed by comparing the projected increase in traffic noise levels from existing conditions to Existing Plus Project Conditions to the applicable significance criteria. Future cumulative conditions include traffic volumes from future ambient growth, related projects, and the Project. The calculated traffic noise levels under existing and Existing Plus Project weekday conditions are presented in Table IV.D-14 in Section IV.D, Noise, of this Draft EIR. As shown therein, on a typical weekday the cumulative traffic volumes would result in a maximum increase of 1.7 dBA (CNEL) along Seaside Way (East of Pine Avenue). On a typical weekend day, the cumulative traffic volumes would result in a maximum increase of 2.2 dBA (CNEL) along Seaside Way (East of Pine Avenue), as indicated in Table IV.D-14. At all other analyzed roadway segments, the increase in cumulative traffic noise would be lower. The increase in cumulative traffic noise would be below the most stringent 3 dBA significance threshold. Therefore, cumulative noise impacts due to off-site mobile noise sources associated with the Project, future growth, and related projects would be less than significant.

c. Project Design Features

The following project design features are proposed with regard to noise and vibration:

Project Design Feature NOI-1: Power construction equipment (including combustion engines), whether fixed or mobile, shall be equipped with state-of-the-art noise shielding and muffling devices (consistent with manufacturers' standards). All equipment shall be properly maintained to assure that no additional noise due to worn or improperly maintained parts would be generated.

Project Design Feature NOI-2: Project construction shall not include the use of driven piles systems.

Project Design Feature NOI-3: During operation, Project-related outdoor mechanical equipment shall be designed so as not to exceed 55 dBA at the Project property line, in accordance with the LBMC.

Project Design Feature NOI-4: Project loading dock and trash collection areas shall be designed such that the line of sight between these noise sources and any adjacent noise sensitive land use shall be obstructed to the extent necessary to comply with LBMC.

Project Design Feature NOI-5: Outdoor amplified sound systems shall be designed so as not to exceed a maximum noise level of 80 dBA (L_{eq}) at a distance of 50 feet from the amplified sound system.

d. Mitigation Measures

Although the estimated Project-level construction noise would be below the significance threshold during construction, cumulative construction noise impacts may result in exceedances of significance thresholds. Therefore, the following mitigation measures are included to reduce cumulative construction-related noise impacts:

Mitigation Measure NOI-1: Stationary source equipment that is flexible with regard to relocation (e.g., generators and compressors) shall be located so as to maintain the greatest distance from noise-sensitive land uses, and unnecessary idling of such equipment shall be prohibited.

Mitigation Measure NOI-2: Loading and unloading of heavy construction materials shall be located on-site and away from noise-sensitive uses, to the extent feasible.

Mitigation Measure NOI-3: A temporary and impermeable 15-foot high sound barrier shall be erected at the locations listed below. At plan check, building plans shall include documentation prepared by a qualified noise consultant verifying compliance with this measure. The sound barriers would only be required if construction of the related projects specified below overlap with Project construction activities.

- Along the north property line of the Project Site. The temporary sound barrier shall be designed to provide a minimum 10-dBA noise reduction at 50 feet of distance. This proposed temporary sound barrier shall be installed if the project proposed at 110 Pine Avenue will have construction activities overlap with Project construction.
- Along the eastern property line of the Project Site. The temporary sound barrier shall be designed to provide a minimum 10-dBA noise reduction at 50 feet of distance as specified by the manufacturer. This proposed temporary sound barrier shall be installed if the project proposed at 210 East Ocean Boulevard will have construction activities overlap with Project construction.

e. Level of Significance After Mitigation

(1) Construction

Implementation of the proposed mitigation measures would reduce Project construction noise levels to the extent feasible. In particular, implementation of Mitigation Measures NOI-1 through NOI-3 would reduce potential cumulative impacts at Receptor R1 and R2. The estimated construction-related noise reductions attributable to Mitigation Measures NOI-1 and NOI-2, although not easily quantifiable, also would reduce noise impacts associated with on-site construction activities to the extent feasible. The minimum 5 dBA noise reduction provided by these mitigation measures would reduce construction noise impacts at the nearest off-site noise-sensitive receptors to a less than significant level. Cumulative construction noise impacts would remain significant and unavoidable.

Project-level and cumulative vibration impacts from Project construction activities would be less than significant.

(2) Operation

Project-level and cumulative impacts with regard to operational noise would be less than significant.

E. Transportation/Traffic

a. Analysis of Project Impacts

(1) Construction Impacts

Potential traffic impacts from Project construction activities could occur as a result of the following types of activities:

- Truck traffic associated with export or import of fill materials and delivery of construction materials;
- Automobile traffic associated with construction workers traveling to and from the Project Site;
- Reductions in existing street capacity from temporary lane closures necessary for the construction of access improvements, utility connections, and drainage facilities; and
- Blocking existing vehicle or pedestrian access to other parcels fronting streets.

The following discussion addresses these potential impacts based on the construction characteristics of the Project. A set of construction assumptions were established for each phase of construction, including demolition, excavation, building construction, architectural coatings, and paving. The excavation and grading phase is estimated to generate the greatest amount of construction-related traffic during daytime hours. As such, the construction analysis considered the peak haul trips and construction worker trips during this phase.

(a) Construction Trip Generation and Traffic Impacts

An estimated 180 haul truck trips (round trips) per day would occur during the excavation and grading phase of construction.[37] Given typical construction hours of 7:00 A.M. to 3:30 P.M., an average of 21.2 trucks per hour would contribute traffic on local roadways. Using a passenger car equivalent of 3.0, these 21.2 trucks would yield the equivalent of 64 passenger car trips per hour in each direction. Thus, a total equivalent of 128 inbound and outbound passenger car trips per hour would result.

All construction traffic was assumed to enter and exit the study area via the I-710 Freeway. Trucks would use Shoreline Drive and Pine Avenue as haul routes to access the Project Site. The 128 truck trips were assigned on top of the Existing Conditions A.M. peak-hour traffic volumes (since daily construction activities would end before the P.M. peak hour). As shown in Table 8 of the Traffic Study, with the addition of truck trips during the A.M. peak hour, the study intersections along the haul route would still operate at LOS A. Therefore, construction traffic impacts to levels of service would be less than significant.

(b) Access and Safety

Temporary lane closures along Pine Avenue and Seaside Way adjacent to the Project Site may be necessary during Project construction. Any such closures would be coordinated with and approved by the City of Long Beach Department of Public Works, Traffic and Transportation Bureau. In addition, accordance with Project Design Feature TRA-1, traffic control would be provided for any street/lane closure, detour, or other disruption to traffic circulation, as appropriate.

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[37] *It is noted that the continuous concrete pour planned during the building foundation phase would involve a greater number of haul truck trips; however, that activity would occur over a 12- to 18-hour period beginning on a Friday evening and lasting until Saturday, and thus would occur during off-peak hours. Accordingly, the construction traffic analysis is based on the maximum number of haul trips occurring during the mass excavation and grading phase in order to evaluate the effect of haul trips on typical weekday peak roadway conditions.*

The sidewalks along Seaside Way and Pine Avenue may be temporarily closed to pedestrians during construction for safety purposes. In addition, due to the sidewalk closure, the bus stop on Pine Avenue and Seaside Way may need to be temporarily relocated. Appropriate detour signage would be installed per Project Design Feature TRA-1, and, as discussed further below, a temporary bus stop would be provided in coordination with Long Beach Transit to ensure uninterrupted service. In addition, access to the Convention Center Walkway would be maintained. Therefore, access and safety impacts during Project construction would be less than significant.

(c) Public Transit

The nearest bus stops to the Project Site are located on Ocean Boulevard near Pine Avenue and on Pine Avenue at Seaside Way. The bus stop on Ocean Boulevard would be permanently relocated in coordination with Long Beach Transit. Additionally, temporary relocation of the Pine Avenue bus stop may be needed, as the sidewalk may be closed temporarily to ensure pedestrian safety. Appropriate detour signage would be installed per Project Design Feature TRA-1, and new temporary and permanent bus stops for the two stops nearest the Project Site would be provided in coordination with Long Beach Transit to ensure uninterrupted service. Therefore, temporary impacts to transit service during Project construction would be less than significant.

(2) Operation Impacts

(a) Intersection Levels of Service

(i) Existing Plus Project Conditions

As previously discussed, the analysis of Existing Plus Project Conditions evaluates potential Project-related traffic impacts as compared to Existing Conditions during the typical weekday A.M. and P.M. peak periods for all intersections. In this scenario, the estimated Project traffic volumes during the morning and afternoon peak periods were added to the existing morning and afternoon peak period traffic volumes, respectively, to determine the change in the volume-to-capacity ratios for the study intersections and the corresponding LOS. Table IV.E-5 in Section IV.E, Transportation/Traffic, of this Draft EIR, summarizes the peak-hour LOS results at the 15 study intersections under Existing Plus Project Conditions. As shown therein, traffic associated with the Project would not cause a significant impact at any of the study intersections. All study intersections would operate acceptably at LOS D or better, except for Intersection No. 10, Alamitos Avenue/Shoreline Drive and Ocean Boulevard, which would operate at LOS E during the P.M. peak period, although the Project-related increase in traffic would not meet the applicable significance threshold. Under Existing Plus Project Conditions, traffic impacts at all 15 study intersections would be less than significant during both the A.M. and P.M. peak hours.

(ii) Future Plus Project Conditions

The analysis of Future Plus Project Conditions identifies the potential impacts of the Project at full buildout on projected future traffic conditions during the typical weekday morning and afternoon peak periods for the study intersections by adding the Project-generated traffic to the Future Without Project traffic forecasts for the year 2022 (i.e., the Project build out year). Table IV.E-6 in Section IV.E, Transportation/Traffic, of this Draft EIR, summarizes the intersection levels of service under Future Plus Project Conditions during the weekday morning and afternoon peak hours. As shown therein, under Future Plus Project Conditions, the Project would not cause a significant impact at any of the study intersections, and 11 of the 15 study intersections would continue to operate acceptably at LOS D or better. Operating conditions at the remaining four study intersections would be as follows, although the Project-related increases in traffic at these intersections would not meet the applicable significance thresholds:

- Intersection No. 10: Alamitos Avenue/Shoreline Drive & Ocean Boulevard (LOS F—P.M.)
- Intersection No. 11: Alamitos Avenue & Broadway (LOS F—P.M.)
- Intersection No. 13: Alamitos Avenue & 4th Street (LOS F—P.M.)
- Intersection No. 15: Alamitos Avenue & 7th Street (LOS E—P.M.)

In summary, under Future Plus Project Conditions, traffic impacts at all 15 study intersections would be less than significant during both the A.M. and P.M. peak hours.

(b) Regional Transportation System

(i) CMP Arterial Monitoring Station Analysis

As previously described, two CMP arterial monitoring locations are located in proximity to the Project Site. These include East Shoreline Drive/Alamitos Avenue and Ocean Boulevard, identified herein as Intersection No. 10, and Alamitos Avenue and 7th Street, identified herein as Intersection No. 15. CMP guidelines require that arterial monitoring intersection locations must be examined if a proposed project will add 50 or more trips during either the A.M. or P.M. weekday peak hours. the Project would generate 4,906 new daily trips, including 320 A.M. peak-hour trips and 372 P.M. peak-hour trips. At Intersection No. 10, the Project would add 64 A.M. peak-hour trips and 74 P.M. peak-hour trips. At Intersection No. 15, the Project would add 48 A.M. peak-hour trips and 54 P.M. peak-hour trips.

Since the Project would add 50 or more trips at the identified CMP intersections during the A.M. peak hour and/or P.M. peak hour, a CMP intersection traffic impact analysis was conducted. Per CMP guidelines, impacts are considered significant at CMP intersections if the Project increases V/C by 0.02 and causes LOS F, or if the facility is already at LOS F and the Project increases the intersection V/C by 0.02. Since Project traffic would not increase V/C by 0.02 at these intersections, impacts on CMP monitoring intersections would be less than significant.

(ii) CMP Freeway Segment Analysis

The nearest mainline freeway monitoring location is CMP Station No. 1078: I-710 Freeway between Pacific Coast Highway and Willow Street. The Project is not anticipated to add 150 or more trips in either direction to any freeway facility during the A.M. or P.M. peak hours. Therefore, a CMP freeway traffic impact analysis is not required.

(c) Public Transit

As previously discussed, public transportation in the Project area is provided by Metro and Long Beach Transit. As shown in Table IV.E-4 in Section IV.E, Transportation/Traffic, of this Draft EIR, the Project would generate 436 A.M. peak-hour trips and 487 P.M. peak-hour trips. In accordance with CMP guidelines, the Project trip generation values presented in Table IV.E-4 were used as the basis to estimate Project-related transit trip generation. Specifically, an average vehicle ridership (AVR) factor of 1.4 was applied to the Project's trip generation, and 15 percent of the resulting person trips were assumed to use transit, consistent with CMP guidance for commercial trips within 0.25 mile of a CMP transit center. As the Project is located approximately 650 feet from the First Street Transit Gallery (also referred to as the Long Beach Transit Gallery or the Long Beach Transit Mall), the Project would generate an estimated 92 transit riders in the A.M. peak hour and 102 transit riders in the P.M. peak hour. Given the availability of public transit in the Project area, it is anticipated that the existing transit service in the Project area would be able to accommodate the Project-generated transit trips. Refer to the Traffic Study in Appendix E.1 of this Draft EIR for details regarding transit capacity on local lines of service during the A.M. and P.M. peak hours. As indicated therein, the Project's projected transit riders would only utilize up to 1.6 percent of available transit capacity during peak hours. Additionally, transit service providers routinely adjust service up to two times a year to reflect demand, and additional transit riders would increase farebox recovery on transit lines. Therefore, given the number of transit trips generated by the Project and the existing transit routes in the Project vicinity, the existing public transit system would not be substantially impacted by the Project. Additionally, as discussed above, the bus stop on Ocean Boulevard would be permanently relocated as part of the Project. A new permanent bus stop would be provided in coordination with Long Beach Transit to ensure uninterrupted service. Thus, impacts to the existing public transit system would be less than significant.

(d) Access and Circulation

As described in Section II, Project Description, of this Draft EIR, vehicular access to the Project garage would be provided via driveways along Seaside Way and Pine Avenue, with primary access from Seaside Way. These driveways would provide access to the valet parking areas on Level 1 and subterranean Level P1. In addition, two existing curb cuts on Ocean Boulevard would be utilized for passenger drop-off and valet service at the main hotel entrance on Level 3. All visitors parking on-site would be required to valet their vehicle. Deliveries, trash, and other service vehicles would access the building from Seaside Way via a loading bay at the southeast corner of the Project Site. As evaluated in the Traffic Study, Project access was determined to be adequate.

(e) Queuing Analysis

To provide a conservative analysis of driveway queuing, the Project's ingress and egress trip generation estimates were not adjusted to reflect employees (who would be required to park off-site) and any visitors who choose not to use the on-site valet service and instead park in another location. Accordingly, 378 A.M. peak-hour trips and 430 P.M. peak-hour trips were assumed for the queueing analysis.[38] Queuing calculations are provided in Appendix D of the Traffic Study.

The Project would provide 350 feet of queuing capacity within the two lanes of the driveway loop, excluding the pedestrian crossing. The 95th percentile queues were measured for the single exit lane, and 100 pedestrian crossings were conservatively assumed to occur during the peak hour. The 95th percentile queue was measured as 530 feet under P.M. peak-hour conditions, which could not be accommodated by the proposed driveway as currently designed and under unrestricted operations.

Field observations along Ocean Boulevard at the Project driveway indicate that gaps occur between waves of vehicles due to the metering of traffic from upstream traffic signals. In particular, Intersection No. 2, Ocean Boulevard and Pine Avenue, has a 2-minute cycle length which provides at least one gap per minute from signal phase changes alone. As such, vehicles exiting the Project's main driveway could have lower

[38] *These trip counts reflect all vehicles potentially entering the main driveway and thus include pass-by trips, but do not include internal capture.*

driveway delays and shorter queues when departing the Project Site, which the queuing calculations do not reflect.

Additional analysis was conducted due to concern over the short distance between the inbound driveway and Intersection No. 2, Ocean Boulevard and Pine Avenue, and the possibility of inbound Project traffic spilling back onto Ocean Boulevard. The ingress and egress volumes are conservative, as they include employees (who would be required to park off-site) and all guests (not all of whom are anticipated to use the valet service and park on-site). As shown in Table 9 of the Traffic Study, the average number of vehicles per 120-second cycle length is estimated to be 4.1 vehicles per cycle from eastbound Ocean Boulevard. Roughly four vehicles per cycle entering the driveway would not negatively affect operations at Intersection No. 2, Ocean Boulevard and Pine Avenue.

In addition, the inbound driveway location relative to the upstream intersection is consistent with other existing driveway locations along Ocean Boulevard. As such, driver expectations relative to driveway location would be consistent along Ocean Boulevard. In addition, the existing 19-foot-wide lane adjacent to the Project Site provides sufficient width to accommodate a right-turn and through movement at the inbound driveway without impeding traffic on Ocean Boulevard.

Nonetheless, the queuing analysis indicates that peak hours and peak events may pose a capacity shortage at the Project's Ocean Boulevard driveway loop. Therefore, it is recommended that a queuing plan be implemented to ensure efficient valet operations and manage queuing within the driveway loop. More specifically, as detailed in the Traffic Study, it is recommended that the hotel provide enough valet staff to facilitate the movement of vehicles after loading and unloading, keep the driveway loop free of obstructions, and respond to queuing issues as they arise. During peak hours and peak events, queuing at the inbound driveway would be monitored, and a second valet staging area in the garage by the Seaside Way driveway would be used to prevent any queue spillback. In situations where the inbound driveway is near capacity, the driveway would be closed to incoming vehicles, and arriving guests would be rerouted to the secondary valet staging area. Additionally, during peak hours outbound guests who valeted their vehicles would be directed to the secondary valet staging area to pick up their vehicles. With such plan in place, adequate queuing capacity would be available to accommodate the 95th percentile queue during peak hours and peak events

(f) Bicycle, Pedestrian, and Vehicular Safety

The City has goals, policies, and implementation measures designed to create a system of complete streets that support and encourage all mobility users, regardless of age or ability, including pedestrians, bicyclists and transit riders. As previously described, pedestrian facilities in the study area include sidewalks, crosswalks, and pedestrian signals, including the Convention Center Walkway which provides direct access between the Project Site and the Long Beach Convention & Entertainment Center. As part of the Project, the adjacent sidewalks would be widened and landscaping would be added surrounding the Project Site.

There are no existing or proposed bike routes adjacent to the Project Site, although there are existing bike lanes on Seaside Way that terminate eastbound at Pine Avenue. The bike share docking station currently located at the northwest corner of the Project Site would remain. In accordance with Project Design Feature TRA-2, TDM measures would be implemented as part of the Project and would include bicycle parking (bike racks located outside and secure bike parking within the garage), end-of-trip bicycle facilities (bike storage, showers, lockers, and a maintenance station) for employees, and the availability of bike share passes for guests. Given that Project access would be adequate and the provision of bike facilities, including retention of the on-site bike share station, the Project would not substantially increase hazards to bicyclists, pedestrians, or vehicles or negatively affect pedestrian and bicycle facilities. Impacts related to bicycle and pedestrian safety and facilities would be less than significant.

(g) Parking

As previously discussed, LBMC Chapter 21.41 and the PD-6 Ordinance set forth parking requirements for development projects based on land use type(s) and floor area. The ordinance recognizes the need for reductions in parking requirements due to the unique transportation characteristics in the Project area. A strict application of the LBMC parking requirements would require 891 parking spaces for the Project. However, since the hotel's parking demand would peak at different times of the day or week, strict application of the LBMC parking requirements would result in an oversupply of parking.

The Project would provide 151 parking spaces within the on-site garage. The shared parking study presented in the Parking Memo provided in Appendix E.2 of this Draft EIR determined that 151 spaces would not be sufficient capacity for Project guests. As such, the Applicant has arranged for off-site parking at the Terrace Theater Parking Garage located at 300 Seaside Way, which would provide 280 overflow spaces. According to the shared parking analysis, the scenario with the greatest estimated parking demand would be a worst-case weekend event entailing full occupancy of the hotel, restaurant, and event space. During a worst-case weekend event, the estimated parking demand would be 395 spaces, which includes 48 spaces for employees, resulting in a need for 347 guest spaces. Accounting for a 20-space parking buffer required by the City, 216 off-site parking spaces would be required. Accordingly, a surplus of 64 parking spaces would remain available at the Terrace Theater Parking Garage. Furthermore, as set forth in Project Design Feature TRA-2, the Project's TDM Plan would reduce vehicular trips, which in turn would reduce parking demand. Relevant TDM measures would include bike facilities, the availability of transit passes, parking unbundling, and a guaranteed ride home program for employees, among others.

The Project meets the PRC Section 21099 definition of an employment center project as a commercially zoned site with a proposed FAR of greater than 0.75:1 within a transit priority area and meets the PRC Section 21099 definition of an infill site as a lot located within an urban area that has been previously developed. Therefore, pursuant to SB 743, the Project's parking impacts shall not be considered a significant impact on the environment as a matter of law.

b. Cumulative Impacts

(1) Construction

As previously discussed, the construction of 57 related projects is anticipated in the general Project area. These 57 related projects are dispersed throughout the area and would draw upon a workforce from all parts of the Los Angeles County and Orange County region. Many, and likely most, of the construction workers are anticipated to arrive and depart the individual construction sites during off-peak hours (i.e., arrival prior to 7:00 A.M. and departure between 3:00 and 4:00 P.M.), thereby avoiding construction-related trips during the A.M. and P.M. peak traffic periods. In addition, it is anticipated that the haul routes for the related projects would be approved by the City according to the location of the individual construction sites and the ultimate disposal destination(s) in a manner that reduces impacts to the local and regional roadway systems as much as possible. The City's established review process takes into consideration overlapping construction projects and would balance haul routes to minimize the impacts of cumulative hauling on any particular roadway.

As evaluated in the Traffic Study and discussed herein, the Project's construction traffic impacts would be less than significant, and all study intersections along the haul route would continue to operate at LOS A during the A.M. peak-hour (daily construction activities would end before the P.M. peak hour). Accordingly, the Project's impacts would not be cumulatively considerable, and cumulative construction-related traffic impacts would be less than significant.

(2) Operation

The traffic models used in the analysis incorporate forecasted traffic increases due to ambient growth as well as the related projects identified in the area through the year 2022. Furthermore, the CMP analysis evaluates traffic impacts on a larger, regional scale.

Therefore, cumulative impacts on intersections and the regional transportation system as a result of the Project are accounted for in the analysis. The following is a summary of the Future Plus Project Conditions—or cumulative—impacts.

(a) Intersection Levels of Service

Under cumulative conditions (Future Plus Project Conditions), none of the study intersections would experience significant impacts as a result of the Project. Therefore, the Project's impacts would not be cumulatively considerable, and cumulative impacts at all study intersections would be less than significant.

(b) Regional Transportation System

(i) CMP Arterial Monitoring Station Analysis

The Project would add 50 or more trips at the identified CMP intersections during the weekday A.M. peak hour and P.M. peak hour. Specifically, at Intersection No. 10, the Project would add 64 A.M. peak-hour trips and 74 P.M. peak-hour trips; Intersection No. 15, the Project would add 48 A.M. peak-hour trips and 54 P.M. peak-hour trips. Since Project traffic would not increase V/C by 0.02 at these intersections, impacts on CMP monitoring intersections would be less than significant. Therefore, the Project would not contribute to a significant cumulative impact at this location.

(ii) CMP Freeway Segment Analysis

The Project would not add 150 or more trips (in either direction) during the A.M. or P.M. weekday peak periods at the nearest mainline freeway monitoring location. Therefore, the Project would not contribute to a significant cumulative impact at this location.

(iii) Public Transit

As with the Project, the related projects would generate an overall increase in transit ridership. However, this effect is a considered a positive impact and is consistent with City land use and transportation policies to reduce traffic. Given the availability of public transit in the Project area, the anticipated increased transit ridership associated with the Project and related projects is not expected to exceed the capacity of transit systems. Thus, Project impacts with regard to transit would not be cumulatively considerable, and cumulative impacts would be less than significant.

(c) Access and Circulation

Due to the distance of the related projects from the Project Site, it is not anticipated that the Project, when combined with the related projects, would create a significant cumulative impact relative to access and circulation. In addition, as with the Project, the related projects would be subject to review by the City for compliance with standard requirements regarding adequate access and circulation. Therefore, the Project's impacts would not be cumulatively considerable, and cumulative impacts to access and circulation would be less than significant.

(d) Bicycle, Pedestrian, and Vehicular Safety

Project impacts related to bicycle, pedestrian, and vehicular safety would be less than significant. In addition, as with the Project, it is anticipated that future related projects would be subject to City review to ensure that such projects are designed with adequate safety specifications and facilities for bikes and pedestrians, including standards for sight distance, sidewalks, crosswalks, and pedestrian movement controls. Thus, Project impacts with regard to bicycle, pedestrian, and vehicular safety would not be cumulatively considerable, and cumulative impacts would be less than significant.

(e) Parking

As with the Project, all related projects would be subject to City review to ensure that adequate parking be provided. In addition, pursuant to SB 743, the Project's parking impacts shall not be considered a significant impact on the environment as a matter of law. Therefore, Project impacts with regard to parking would not be cumulatively considerable, and cumulative parking impacts would be less than significant.

c. Project Design Features

In addition to the Project characteristics and improvements described in Section II, Project Description, of this Draft EIR, the Project would implement the following specific project design features regarding transportation/traffic:

Project Design Feature TRA-1: Prior to the start of construction, the Project Applicant shall prepare a detailed Construction Traffic Management Plan, including haul routes and a staging plan, and submit it to the City of Long Beach Department of Public Works, Traffic and Transportation Bureau for review and approval. The Construction Traffic Management Plan shall formalize how construction would be carried out and identify specific actions to reduce resulting effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and shall include, but not be limited to, the following elements, as appropriate:

- Traffic control for any street/lane closure, detour, or other disruption to traffic circulation.
- Identify the routes that construction vehicles would utilize for the delivery of construction materials (i.e. lumber, tiles, piping, windows, etc.), to access the Project Site, traffic controls and detours, and proposed construction phasing plan for the Project.
- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets.
- Require the Applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The Applicant shall clean adjacent streets, as directed by the City Engineer (or representative of the City Engineer), of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.
- Hauling or transport of oversize loads shall be allowed between the hours of 9:00 A.M. and 3:00 P.M. only, Monday through Friday, unless approved otherwise by the City Engineer. No hauling or transport of oversize loads shall be allowed during nighttime hours, weekends or federal holidays.
- Haul trucks entering or exiting public streets shall at all times yield to public traffic.
- Construction-related parking and staging of vehicles shall occur on-site to the extent possible, but may occur on nearby public and/or private parking lots/garages, as approved by the City Engineer.
- Appropriate signage and facilities shall be installed to ensure safety and direct pedestrians in the event of any temporary sidewalk closure or the temporary relocation of any bus stop.
- The Construction Traffic Management Plan shall meet standards established in the current *California Manual on Uniform Traffic Control Device (MUTCD)* as well as City of Long Beach requirements.

Project Design Feature TRA-2: In compliance with LBMC Section 21.64.030(B) 1, 2, and 3, the Project shall implement transportation demand management (TDM) measures to reduce vehicle trips and encourage the use of public transit and other alternative modes of transportation. These measures shall include, but not be limited to: bicycle parking, bicycle rental, end-of-trip bicycle facilities, an active transportation-oriented ground floor, wayfinding signage, car share parking, car share membership, guaranteed ride home program, pre-loaded transit cards/bike share passes, unbundled parking, hotel confirmation with multi-modal information, in-room information regarding transportation options, website transit and commute information, and designation of a Transportation Coordinator. Details of the proposed TDM Plan are set forth in *100 E. Ocean Boulevard Transportation Demand Management Plan* prepared by Fehr & Peers, provided in Appendix E.3 of the Draft EIR.

In accordance with the LBMC, the Project Applicant also would be required to pay a Transportation Improvement Fee. The fee will be determined by the City upon issuance of Project building permits.

d. Mitigation Measures

Project-level and cumulative impacts would be less than significant with regard to intersection levels of service; the regional transportation system; public transit; access and circulation; bicycle, pedestrian, and vehicular safety; and parking. Therefore, no mitigation measures are required with respect to these issues.

Although the City has not adopted a threshold of significance pertaining to vehicle queuing, given the potential for queuing capacity issues at the Ocean Boulevard driveway loop during peak hours and peak events, the following measure is recommended:

Mitigation Measure TRA-1: During A.M. and P.M. peak hours and peak events, queuing at the inbound Ocean Boulevard driveway shall be monitored by the hotel's valet staff. When the inbound driveway is observed to be near capacity, a queuing plan shall be implemented to create a secondary valet staging area and prevent any queue spillback onto the public right-of-way. The queuing plan shall be submitted to the City of Long Beach Department of Public Works, Traffic and Transportation Bureau and the Department of Development Services, Planning Bureau for review prior to building permit issuance and approval prior to Certificate of Occupancy.

e. Level of Significance After Mitigation

(1) Construction

Project-level and cumulative impacts to traffic during Project construction would be less than significant, and no mitigation is required.

(2) Operation

(a) Intersection Levels of Service

Intersection levels of service impacts at all study intersections would be less than significant under Existing With Project Conditions and Future With Project Conditions. No mitigation is required.

(b) Regional Transportation System

(i) CMP Arterial Monitoring Station Analysis

Project-level and cumulative impacts to CMP arterial monitoring stations would be less than significant, and no mitigation is required.

(ii) CMP Freeway Segment Analysis

the Project would not add 150 or more trips (in either direction) during the A.M. or P.M. weekday peak periods at the nearest mainline freeway monitoring location. Therefore, Project-level and cumulative impacts to a CMP freeway monitoring location would be less than significant, and no mitigation is required.

(c) Public Transit

Project-level and cumulative impacts with regard to transit would be less than significant, and no mitigation is required.

(d) Access and Circulation

Project-level and cumulative access and circulation impacts would be less than significant, and no mitigation is required.

(e) Queuing Analysis

With a queuing plan in place as set forth in Mitigation Measure TRA-1, adequate queuing capacity would be available to accommodate the 95th percentile queue during peak hours and peak events. Specifically, as detailed in the Traffic Study, by adding a secondary valet staging area when needed, the number of vehicles using the driveway loop during the P.M. peak hour would be reduced from 430 vehicles per hour to 280 vehicles per hour. The number of vehicles turning right on Ocean Boulevard from Pine Avenue to access the main driveway would be reduced from 207 vehicles per hour to 57 vehicles per hour, or just under two vehicles per signal cycle. This would reduce the outbound queues at the driveway from 530 feet to 206 feet, which could be accommodated by the proposed driveway loop.

(f) Bicycle, Pedestrian, and Vehicular Safety

Project-level and cumulative access impacts related to bicycle, pedestrian, and vehicular safety and facilities would be less than significant, and no mitigation is required.

(g) Parking

Project-level and cumulative impacts related to parking would be less than significant, and no mitigation is required. In any event as previously discussed, pursuant to SB 743, the Project's parking impacts shall not be considered a significant impact on the environment as a matter of law.

II. Project Description

II. Project Description

1. Introduction

100 East Ocean Blvd, LP, the Project Applicant, proposes a new hotel on a 59,501-square-foot (1.36-acre) site located at 100 East Ocean Boulevard (Project Site) in the City of Long Beach (City). The Project Site, which is the former site of the Jergins Trust Building, is bounded by Ocean Boulevard to the north, the Convention Center Walkway and an office building to the east, Seaside Way to the south, and Pine Avenue to the west.[1] The Project Applicant proposes a 30-story, 537,075-square-foot building of up to 375.5 feet in height that would include 429 hotel rooms, 23,512 square feet of restaurant space, 26,847 square feet of meeting and ballroom space, and 151 on-site parking stalls (collectively, the Project).[2] The proposed building would replace an existing surface parking lot on the Project Site. Pedestrian walkways, new landscaping, and access to and restoration of the Jergins Trust Tunnel would be provided. The Project also includes improvements to the portion of Victory Park located within the Project Site boundaries, including new landscaping.

2. Project Location and Surrounding Uses

As illustrated in the Project location map provided in Figure II-1 on page II-2, the Project Site is located in Downtown Long Beach. Primary regional access is provided by Interstate 710 (I-710 or Long Beach Freeway), which runs north-south and terminates 0.9 mile west of the Project Site. Local access is provided via surface streets including Ocean Boulevard and Pine Avenue adjacent to the Project Site.

As shown in Figure II-2 on page II-3, the Project Site is located in an urbanized area surrounded by a variety of primarily commercial land uses. To the west, across Pine Avenue is the Ocean Center Building, an office building and Long Beach Historic

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1 *Although Seaside Way is officially named East Seaside Way east of Pine Street and West Seaside Way west of Pine Street, and Ocean Boulevard is named East Ocean Boulevard east of Pine Avenue and West Ocean Boulevard west of Pine Avenue, the general names Seaside Way and Ocean Boulevard are used herein, except where a distinction is needed based on specific locations or routes.*

2 *This height is to the top of the penthouse screen wall as measured from Ocean Boulevard per Long Beach Municipal Code (LBMC). The building height measured from Seaside Way would be 402.25 feet.*

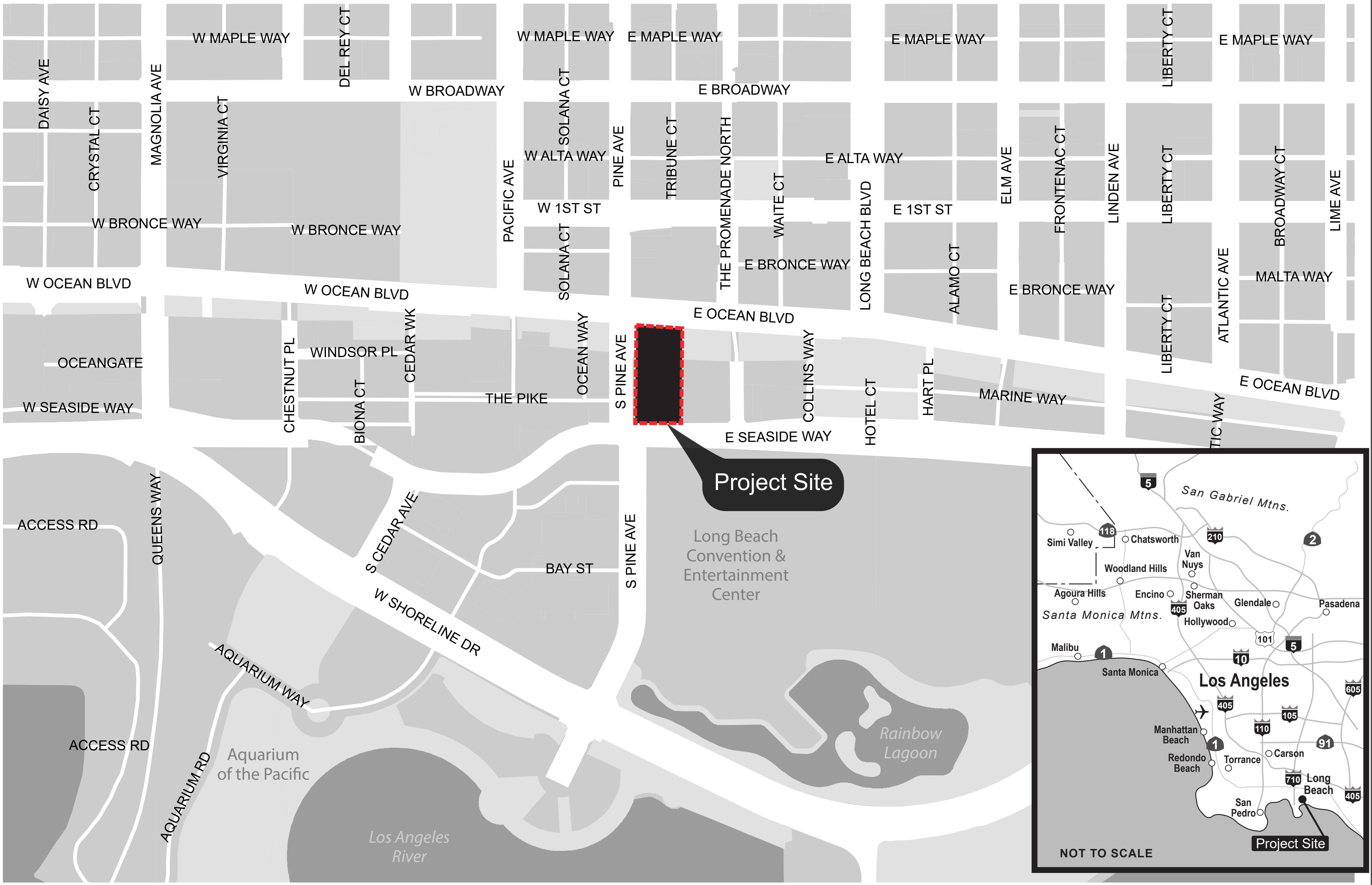

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Figure II-1
Project Location Map

Source: City of Long Beach Technology & Innovation Department GIS, 2018; Eyestone Environmental, 2018.

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Figure II-2
Aerial Photograph of the Project Vicinity

Source: Google Earth, 2018; Eyestone Environmental, 2018.

Landmark, with commercial and residential uses and associated surface parking further west along Ocean Boulevard. Commercial and office uses also are located immediately northwest of the Project Site, with the Metro Blue Line Downtown Long Beach (Transit Mall) station further to the north on 1st Street. To the north across Ocean Boulevard are the Renaissance Long Beach Hotel and several restaurants. Immediately to the east of the Project Site, separated by a retaining wall, are the Convention Center Walkway and an office building. Further to the east, across Locust Avenue, is the Breakers Hotel building, a Long Beach Historic Landmark, which is largely vacant at the present time. To the south and southeast, across Seaside Way, is the Long Beach Convention and Entertainment Center. Various commercial uses including restaurant and retail uses are located to the southwest.

3. Existing Project Site Conditions

The majority of the Project Site is currently developed with a surface parking lot, consisting of 80 vehicular parking spaces and an automated pay station. There are no habitable structures or landscaping within the parking lot, and concrete retaining walls line the northern and eastern site boundaries. Access to the southern end of the Jergins Trust Tunnel is sealed along the northern retaining wall. The northern part of the Project Site includes a portion of Victory Park, which currently houses a temporary public art project known as “The Loop,” along with seating areas and landscaping. A Long Beach Bike Share station is located at the northwestern corner of the Project Site. One street tree is located along Ocean Boulevard, and eight street trees are located along Pine Avenue adjacent to the Project Site. In addition, a single ingress/egress driveway is located along Seaside Way and two ingress/egress driveways are located along Ocean Boulevard. The Project Site slopes down towards the south at an approximately 7.9 percent grade, with the Ocean Boulevard elevation approximately 25 feet above Seaside Way.

4. Land Use and Zoning

a. City of Long Beach General Plan

The Project Site is designated as Land Use District (LUD) No. 7, Mixed Use District, and No. 11, Open Space and Park District, by the City’s General Plan. As set forth in the General Plan, uses intended for LUD No. 7 include employment centers, such as retail uses, offices, and medical facilities; higher density residences; visitor-serving facilities; personal and professional services; and recreational facilities. LUD No. 11 includes open space and park areas which are intended to remain or be redeveloped in the future in (essentially) an open condition. The Project Site is located within a coastal zone and is therefore subject to the requirements of the City’s Local Coastal Program, including a Local Coastal Development Permit. The Local Coastal Program includes policies to increase use of public transit, walking, and bicycling opportunities, and encourages recreation and visitor-serving facilities.

b. City of Long Beach Municipal Code

The Project Site is zoned by the Long Beach Municipal Code (LBMC) as Subarea 7 within the Planned Development District 6 (PD-6), Downtown Shoreline Planned Development District (Downtown Shoreline Plan). As described in the Shoreline Plan, PD-6 provides a community of residential, business, and light industrial uses integrated by an extensive system of parks, open space, and trails. The Downtown Shoreline Plan specifically identifies residential, hotel, and office uses within Subarea 7 and includes specific requirements pertaining to ancillary uses such as retail uses, restaurants, and art galleries, as well as access, building design, and setbacks. In addition, as the former site of the Jergins Trust Building, the Subarea 7 requirement to provide a corner cut-off at the northeast corner of the site to create a cohesive entry feature to the Promenade South from Pine Avenue applies to the Project.[3]

c. Long Beach Redevelopment Agency

The Project Site was formerly owned by the Long Beach Redevelopment Agency (Redevelopment Agency). Prior to the dissolution of the Redevelopment Agency, the Project Site was identified for future development within the Downtown Long Beach Project Area.[4] The Project Site is identified in the approved Successor Agency Long Range Management Plan for "high-density development to maximize overall economic benefit to downtown and in accordance with the use of eminent domain."[5]

5. Project Objectives

Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines states that the project description shall contain "a statement of the objectives sought by the proposed project." Section 15124(b) of the CEQA Guidelines further states that "the statement of objectives should include the underlying purpose of the project." The underlying purpose of the Project is to revitalize the Project Site by developing a high quality hotel that provides new lodging opportunities to serve the Long Beach community

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3 *Per City Ordinance No. ORD-U-0017.*

4 *Long Beach Redevelopment Agency, "Downtown Long Beach," www.longbeachrda.org/civica/filebank/blobdload.asp?BlobID=2456, accessed January 15, 2019.*

5 *City of Long Beach, Revised Long Range Property Management Plan, www.lbds.info/documents/Long RangePropMgtPlan/LRPMP.pdf, p. 42, property 113, accessed January 15, 2019.*

as well as publicly accessible restaurant and bar uses that encourage pedestrian activity in the vicinity of the Project Site. As set forth in the CEQA Guidelines, the Project's specific objectives are provided below:

- Support and expand tourism and business activity in the Downtown Shoreline area by developing new lodging opportunities that are easily accessible to entertainment and commercial destinations in Long Beach to help meet the goals of the City's Blueprint for Economic Development and Local Coastal Program;

- Reduce vehicular trips promoting local, regional, and state mobility objectives and policies by developing a hotel use with convenient access to a variety of alternative transportation options including walking, biking, and public transit, and in close proximity to popular tourist destinations.

- Redevelop an underutilized vacant site by replacing an existing surface parking area with an economically viable and aesthetically attractive development that will be physically and programmatically compatible with the wide variety of urban uses in the vicinity in a manner that will help meet the goals of the City's Revised Long Range Property Management Plan.

- Create a pedestrian-friendly project by improving the portion of Victory Park located within the Project Site to create publicly accessible open space, introducing a pedestrian walkway that connects to the existing Convention Center Walkway, and improved streetscapes around the Project Site.

- Provide short-and long-term employment opportunities and generate transient occupancy tax and other revenue for the City.

- Enhance access to and through Victory park while improving the programming and maintenance of the public park space.

- Provide a mix of convention-serving hotel, hotel amenity, and commercial uses adjacent to the Convention Center that will enhance the convention visitor experience and attract convention guests and bookings to Long Beach.

- Provide public access to, enable the appreciation of and provide education regarding the historic Jergins Trust tunnel.

- Provide high-quality, signature architectural design that will enhance the downtown skyline and provide views of the Long Beach coastline and downtown environs.

- Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation.

6. Description of the Project

a. Project Characteristics

The Project Applicant proposes to replace the existing parking lot on the Project Site with a new 537,075-square-foot hotel with 429 rooms comprised of 171 king rooms, 152 double queen rooms, 76 suites, and 30 penthouse suites; 23,512 square feet of restaurant uses; and 26,847 square feet of meeting rooms, ballrooms, and pre-function space. In addition, hotel amenities would include a pool deck and bar, fitness center, executive lounge, guest laundry, and a main floor lounge. The Project also includes improvements to Victory Park along Ocean Boulevard, including retaining the existing curb cuts on Ocean Boulevard to provide passenger loading and unloading, as well as providing pedestrian pathways, permeable hardscape, and new landscaping. The proposed hotel uses would be located in a 30-story building of up to 375.5 feet in height, consisting of a tower over a podium, with new landscaping and outdoor amenity areas. The proposed uses are summarized in Table II-1 on Page II-8, and a composite site plan is provided in Figure II-3 on page II-9.

Parking for the Project would be provided through a combination of on- and off-site parking. On-site parking would be valet only, with a total of 151 parking spaces provided in one subterranean level and one partial at-grade level with access from Seaside Way and Pine Avenue. Thirty long-term bicycle parking spaces would be located in a secure room on Level 1, and eight short-term bicycle parking spaces would be located near the main entry. Off-site parking would also be valet only, with parking located at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. The Project would reconnect the Project Site with the Jergins Trust Tunnel, a subterranean walkway previously associated with the Jergins Trust Building that extends from the Project Site to the north side of Ocean Boulevard near a sub-grade level of the Renaissance hotel north of Ocean Boulevard (the north end of the tunnel would not be reopened as part of the Project). The tunnel would be used for educational tours, and interpretive signage and images would be introduced to describe the tunnel's history. The Project would have a total floor area ratio (FAR) of approximately 14.32:1.

Improvements to the portion of Victory Park within the Project Site include the retention of the existing curb cuts to provide passenger loading and unloading; installation of new landscaping and permeable hardscape; and completion of a pedestrian walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site, as shown on Figure II-3. The existing Long Beach Bike Share station located on the Project Site would remain as part of the Project.

Table II-1
Summary of Proposed Development

Land Use	Gross Floor Area
Hotel (429 rooms)	446,123 sf
Pool deck and bar[a]	9,500 sf
Fitness Center[a]	2,000 sf
Main Floor Lounge[a]	1,500 sf
Executive Lounge[a]	2,000 sf
Guest Laundry[a]	300 sf
Restaurant—Full Service	23,512 sf
Meeting Rooms, Ballrooms, and Pre-Function Space	26,847 sf
On-Site Parking	40,593 sf
Total	**537,075 sf**

sf = square feet

[a] *The hotel amenities are included in the total hotel square footage.*

Source: GBD Architects Incorporated, 2018.

b. Project Design

As shown in Figure II-4 on page II-10, the hotel would consist of a tower over a podium. Due to the sloped nature of the Project Site, the main entrance facing Ocean Boulevard and opening onto Victory Park would be located on Level 3 of the building along with the main lobby, while the vehicular entrance on Level 1 would be accessed from Seaside Way on the south side of the building. The podium would rise from Seaside Way, with shifting floorplates to create rooftop decks on Levels 3, 6, and 7 along different sides of the building. In particular, on Level 6 an outdoor amenity deck would feature a pool, spa, bar, and planted areas. At the northeastern corner of the building, the lower floors would have an indented, angled footprint to create a corner cut-off in accordance with PD-6, Subarea 7 requirements. The tower would visually rise from Ocean Boulevard and include a restaurant on Level 30, with outdoor dining areas providing views of Downtown Long Beach and the shoreline. Screened mechanical equipment would be located on the roof. The building would have a height of 375.5 feet as measured from Ocean Boulevard per LBMC. Renderings of the building elevations are provided in Figure II-5 through Figure II-8 on pages II-11 through II-14.

The Project would be designed in a contemporary architectural style with a blend of precast concrete and aluminum framed glass systems. More specifically, over half of the building façade area would consist of precast concrete, metal panels, louvers, or opaque glass. The remaining building façade area would be vision glass, 28 percent of which

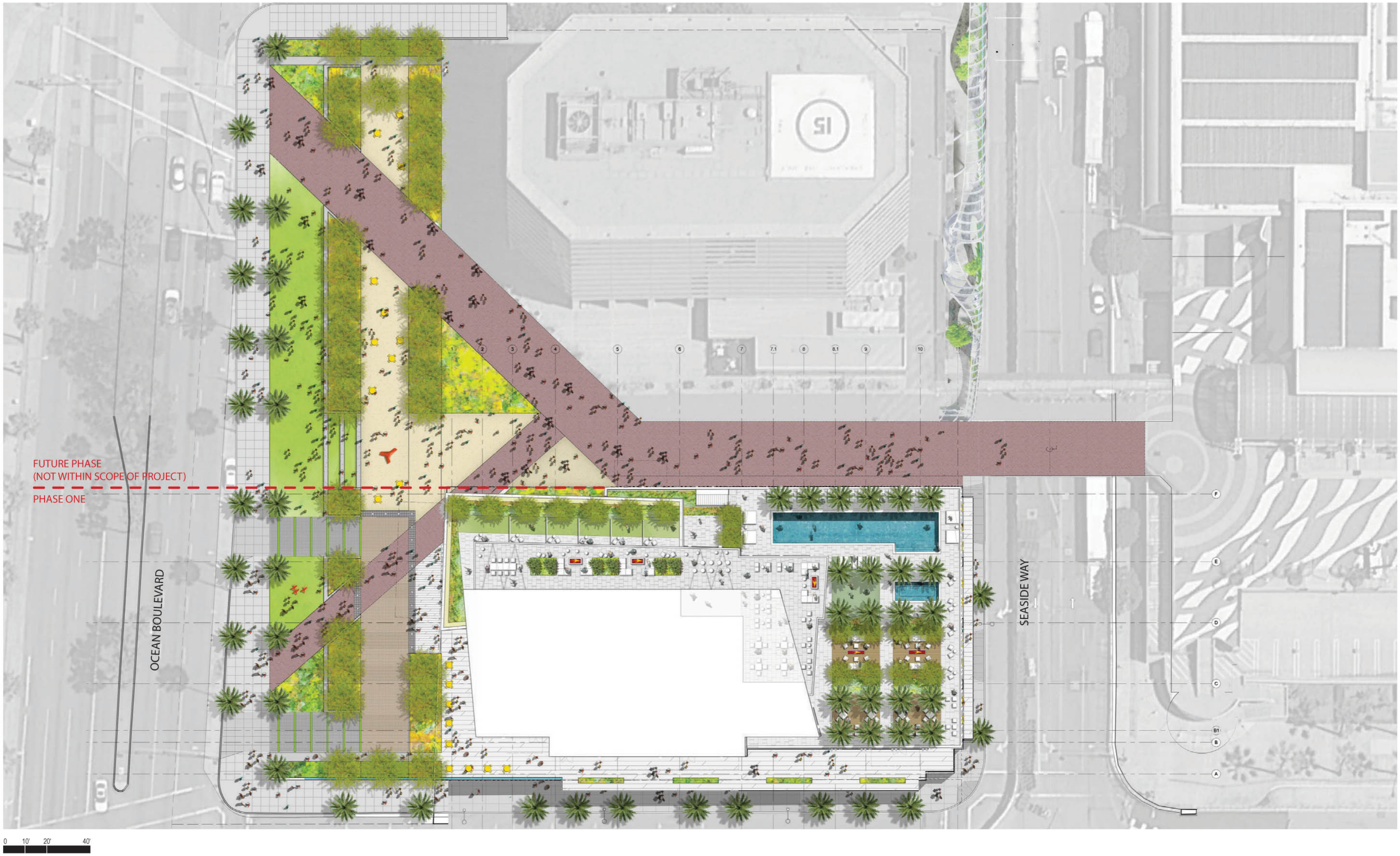

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Figure II-3
Composite Site Plan

Source: GBD Architects Incorporated / RELM, 2018.

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Figure II-4
Project Rendering

Source: GBD Architects Incorporated / RELM, 2018.

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Figure II-5
East Elevation

Source: GBD Architects Incorporated / RELM, 2018.

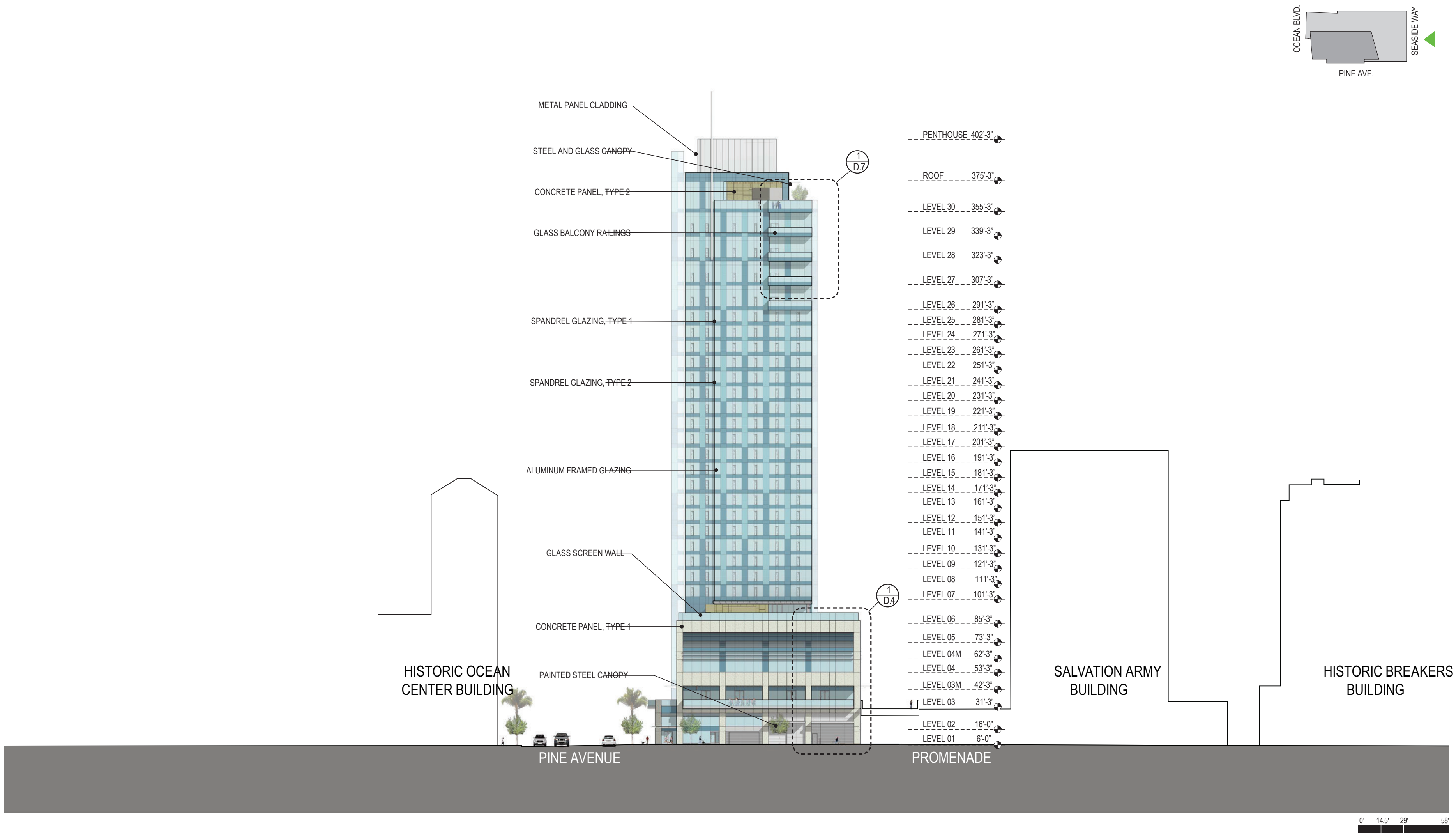

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Figure II-6
South Elevation

Source: GBD Architects Incorporated / RELM, 2018.

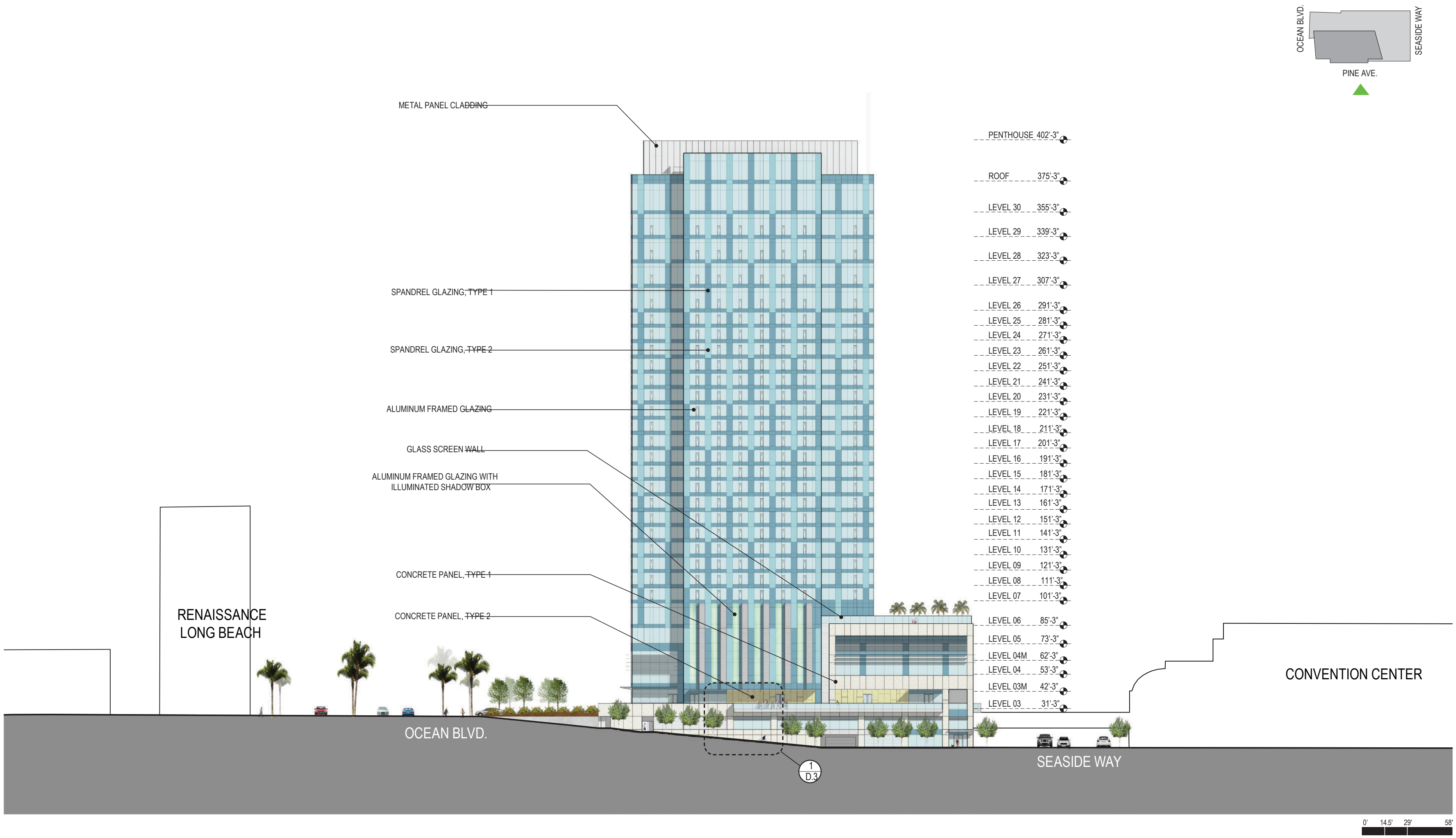

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Figure II-7
West Elevation

Source: GBD Architects Incorporated / RELM, 2018.

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Figure II-8

North Elevation

Source: GBD Architects Incorporated / RELM, 2018.

would have bird safe treatments to minimize bird strikes, consistent with the Bird-Safe Buildings requirements for PD-6. Existing curb cuts on Ocean Boulevard would allow passenger loading and unloading on the Project Site. To help activate the pedestrian environment, the proposed design would include a diagonal walkway from the intersection of Ocean Boulevard and Pine Avenue to the existing Convention Center Walkway. The Project would also capitalize on its location fronting Victory Park by introducing new landscaping and pedestrian pathways. Enhanced paving materials including concrete, cobblestone, decomposed granite, brick, and truncated domes would be utilized along walkways and other outdoor surface areas.

In general, the proposed uses would be located in distinct areas of the new building, as summarized below:

- Level P1—parking;
- Level 1—(Seaside Way)—vehicular access and parking, secondary pedestrian lobby, access to Jergins Trust Tunnel;
- Level 2—meeting rooms, Jergins Trust Tunnel Gallery;
- Level 3—(Ocean Boulevard)—main lobby with reception/concierge area, lounge, restaurant, outdoor patio;
- Level 4—pre-function space, ballroom, ballroom kitchen;
- Level 5—executive lounge;
- Level 6—executive offices, fitness center, amenity deck with outdoor pool and bar, guest laundry room;
- Level 7—hotel rooms, pet-friendly roof deck;
- Levels 8–29—hotel rooms;
- Level 30—restaurant, rooftop deck and bar.

In addition, mechanical rooms, storage, hotel-related office space, and restrooms would be located throughout various floors of the building.

c. Access and Parking

Vehicular access to the Project Site would be provided via driveways along Seaside Way and Pine Avenue, with primary access from Seaside Way. These driveways would provide access to the valet parking areas on Level 1 and subterranean Level P1. In addition, two existing curb cuts on Ocean Boulevard would be utilized for passenger drop-off and valet service along the main entrance to the hotel on Level 3. Access for delivery, trash, and other service vehicles would access the building via Seaside Way via a loading bay at the southeast corner of the Project Site.

Primary pedestrian access to the hotel would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Upon entering, the main lobby would provide stairway and elevator access to the other areas of the building. Secondary pedestrian access would be provided on Level 1 via a small lobby located at the corner of Pine Avenue and Seaside Way. An exit corridor to Pine Avenue would be provided on Level 2.

As noted above, all on- and off-site parking would be valet only. The valet drop-off area would be located near the main entrance to the hotel on Level 3, accessible via Ocean Boulevard. A total of 151 on-site parking spaces would be provided in a two-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). An additional 280 parking spaces would be located off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Additional parking may be provided off-site in the general downtown area for special events and peak usage periods. Valet trips are expected to make a right turn on to eastbound Ocean Boulevard followed by a right at Locust Avenue to access Seaside Way and enter either the on- or off-site parking garage. The Project would also provide 30 long-term bicycle parking stalls in a secure room on Level 1 and 8 short-term bicycle parking stalls near the main entrance on Level 3. Delivery, trash, and other service vehicles would access the building via Seaside Way through a loading bay at the southeast corner of the Project Site.

d. Landscaping and Open Space

While PD-6, Subarea 7 does not include specific open space requirements, the Project would provide 37,404 square feet of open space, including improvements to Victory Park totaling 13,158 square feet, new landscaping, and a variety of amenities for hotel guests and visitors including an 11,288-square-foot pool deck and bar. Specifically, as noted above and depicted in Figure II-9 through Figure II-13 on pages II-17 through II-21 the Project would include a pedestrian walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site. An outdoor patio would be located on Level 3, wrapping around the north, west, and south sides of the building. New palm trees would be planted along Seaside Way, Pine Avenue, and Ocean Boulevard within Victory Park, and water efficient plants such as agave, euphorbia, and bamboo muhly would be planted throughout the Project Site and Victory Park. Atop the podium, Level 6 would include various outdoor amenities, including a pool,

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Figure II-9
Landscape Plan—Victory Park

Source: GBD Architects Incorporated, 2018.

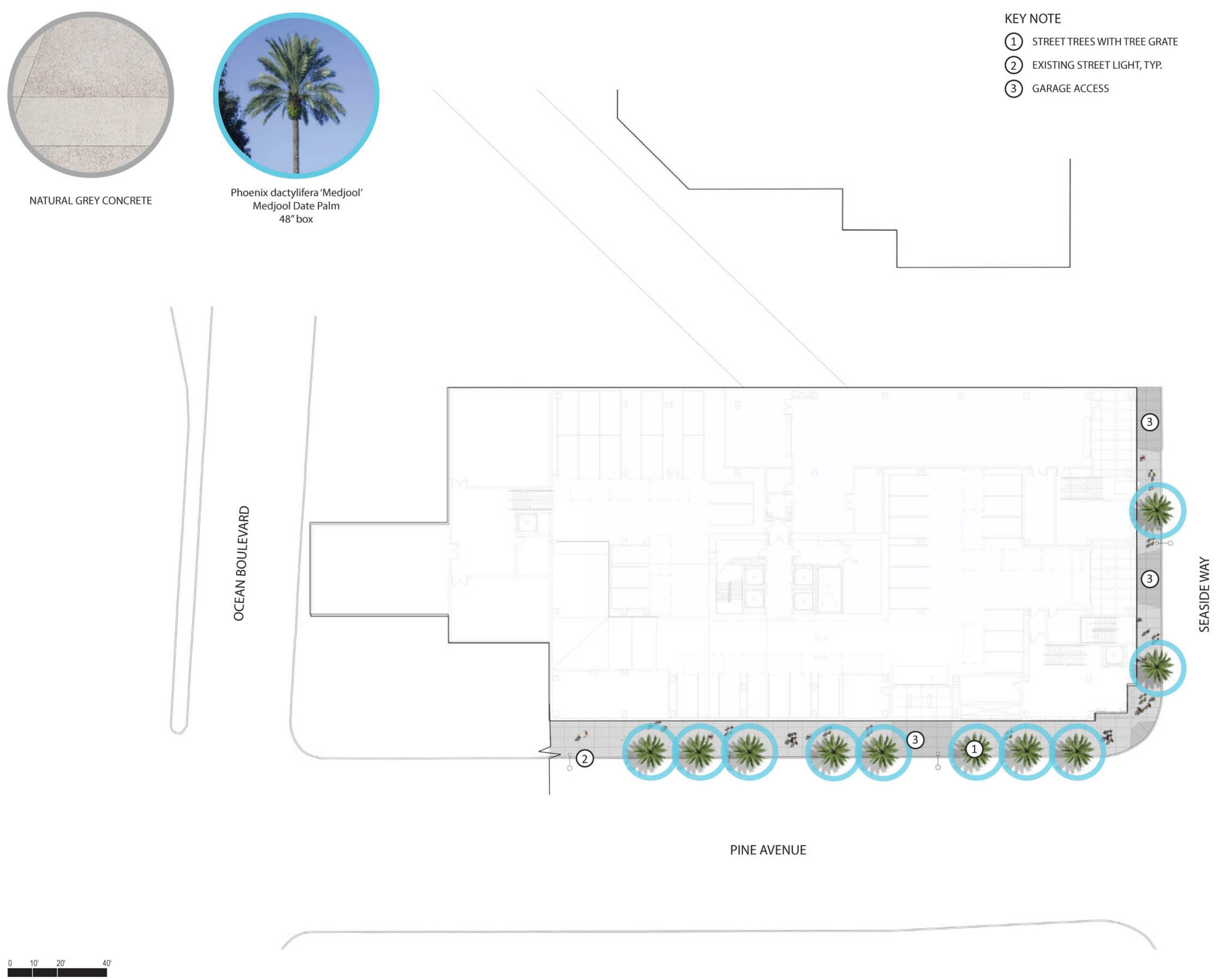

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Figure II-10
Landscape Plan—Lower Streetscape

Source: GBD Architects Incorporated, 2018.

Figure II-11
Landscape Plan—Level 6

Source: GBD Architects Incorporated, 2018.

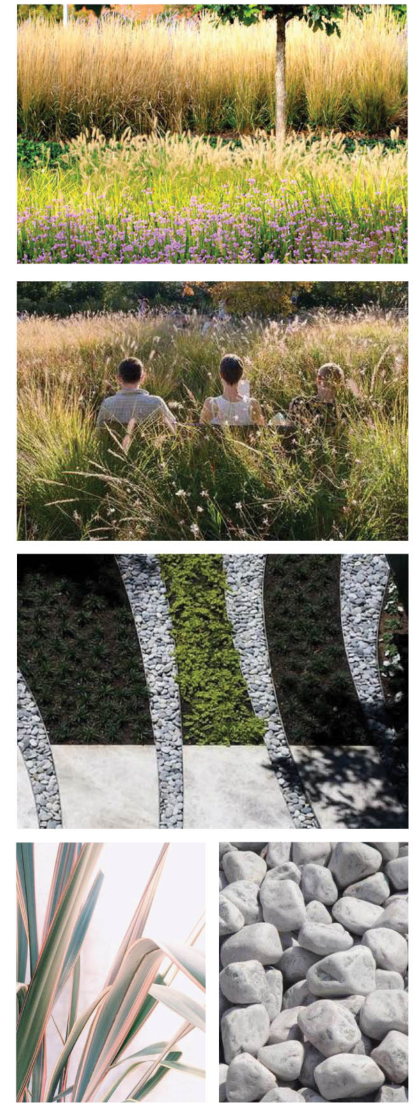

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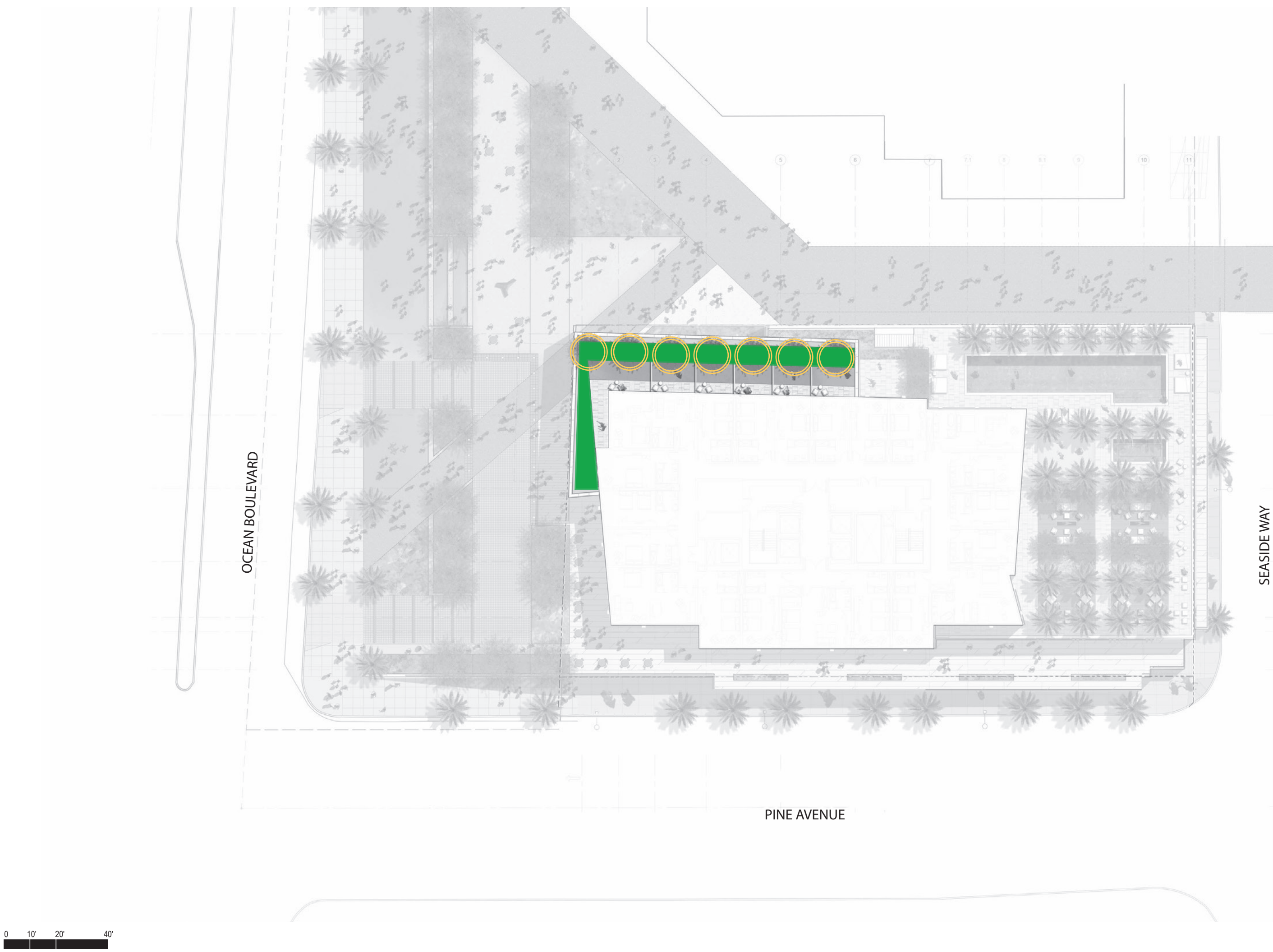
Figure II-12
Landscape Plan—Level 7

Source: GBD Architects Incorporated, 2018.



Heuchera maxima
Island Alum Root
1 gal
18" spacing

Heuchera 'Santa Ana Cardinal'
Santa Ana Cardinal Coral Bells
1 gal
12" spacing

Muhlenbergia rigens
Deer Grass
5 gal
36" spacing

Russelia equisetiformis
Coral Fountain
5 gal
36" spacing

Parkinsonia x 'Desert Museum'
Desert Museum Palo Verde
36" box

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Figure II-13
Landscape Plan—Level 30

Source: GBD Architects Incorporated, 2018.

spa, and planted areas. Level 7 would include an outdoor planted area along the building's eastern side. Levels 26 through 29 would include balconies, and an outdoor seating area with landscaping associated with the proposed restaurant would be located on Level 30. The amenity areas may include amplified sound at the outdoor patio area on Level 3, the pool deck and bar on Level 6, and the rooftop. In addition, any on-site trees or street trees removed during Project construction would be replaced in accordance with the City's Tree Maintenance Policy, LBMC Chapter 14.28 pertaining to street trees, and other applicable City requirements.

e. Lighting and Signage

Exterior lighting would be incorporated along the building and throughout the Project Site for security and wayfinding purposes, as well as entryway lighting along driveways and pedestrian paths for safety. In addition, decorative and architectural lighting would be added to enhance the Site. In accordance with City guidelines, on-site lighting would be shielded to reduce light levels onto off-site uses as well as prevent light aimed upwards to remain in compliance with Dark Sky requirements.

Project signage would include building top identity wall signs, area identification signs, tenant identification wall and blade signs, and directional signage on the building façades. Signage may be projected, raised, and externally illuminated. All Project signage would be visually integrated with the proposed development and would feature colors and lighting that are complementary to the architectural design of the proposed building and the surrounding community. All signage material, sizes, and illumination would comply with LBMC Chapter 21.44 pertaining to on-premises signs.

f. Sustainability Features

The Project would incorporate features to support and promote environmental sustainability. "Green" principles have been incorporated in the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013), and the Project has been designed to achieve the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver® certification. Specific energy conservation, water conservation, and waste reduction features include, but are not limited to, the following:

<u>Energy Conservation and Efficiency</u>

- Use of full-cutoff or fully shielded on-street lighting oriented to pedestrian areas/sidewalks so as to minimize overlighting, light trespass, and glare.

- Use of light emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use.

- Incorporation of energy-efficient design methods and technologies, such as high performance window glazing; undergrounding parking to reduce heat island effects; high-efficiency domestic heaters; and enhanced insulation to minimize solar heat gain.

- Inclusion of outdoor air flow measuring devices, additional outdoor air ventilation, and use of low emitting materials to promote indoor environmental quality.

- Incorporation of generous operable windows and high performance window glazing; and use of natural light.

- Use of insulated plumbing pipes and high-efficiency domestic water heaters.

- Use of insulated mechanical pipes and high-efficiency boilers.

- Use of updated boiler controls to improve efficiency.

- Use of refrigerants that reduce ozone depletion.

- Dedicated outside air units for decoupled heating/cooling.

- Variable air volume kitchen exhaust.

- Occupancy-based hotel room energy management system.

- Demand-controlled ventilation in high occupancy spaces.

- Carbon monoxide monitoring in the parking garage coupled with variable speed garage fans.

- Use of energy-efficient electrical and mechanical equipment and monitoring systems.

- Provision of conduit that is appropriate for future photovoltaic and solar thermal collectors.

- Post-construction commissioning of building energy systems performed on an ongoing basis to ensure all systems are running at optimal efficiency.

Water Conservation

- Inclusion of water conservation measures in accordance with Long Beach Water Department requirements for new development in the City of Long Beach.

- Use of high-efficiency fixtures and appliances.
- Use of high-efficiency Energy Star-rated dishwashers and clothes washers where appropriate.
- Individual metering and billing for water use for the restaurant tenant.
- Prohibition of the use of single-pass cooling equipment (i.e., equipment in which water is circulated once through the system, then drains for disposal with no recirculation).
- Installation of cooling tower automatic water treatment to minimize cooling tower blowdown and water waste.
- Installation of a separate water meter (or submeter), flow sensor, and master valve shutoff for irrigated landscape areas totaling 5,000 square feet and greater.

Water Quality

- Use of on-site storm water treatment and re-use system consisting of a below grade cistern and re-use pump located near the northwest corner of the Project Site. The system will be capable of accommodating up to 3,102 cubic feet of stormwater and a flow rate of up to 0.28 cfs.
- Installation of catch basin inserts and screens to provide runoff contaminant removal.
- Preparation and implementation of a Stormwater Pollution and Prevention Plan, City of Long Beach Low Impact Development Plan, and Standard Urban Stormwater Mitigation Plan, all of which would include Best Management Practices to control stormwater runoff, minimize pollutant loading and erosion effects during and after construction.

Solid Waste

- Provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied.
- Use of building materials with a minimum of 10 percent recycled-content for the construction of the Project.
- Implementation of a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris or minimize the generation of construction waste to 2.5 pounds per square foot of building floor area.

In addition, the Project would include a stormwater capture and reuse system designed to accommodate up to 3,102 cubic feet of stormwater and a flow rate of up to 0.28 cubic feet per second. This system would include underground steel reinforced polyethylene detention tanks with an irrigation reuse pump. The detention system would retain stormwater until it reaches the overflow pipe that connects to the existing storm drain system. The treated stormwater may be used for on-site irrigation.

7. Project Construction and Scheduling

Construction of the Project would commence with demolition of the existing parking lot. This phase would be followed by grading and limited excavation for the placement of building footings. Building foundations would then be laid, followed by building construction, paving/concrete installation, and landscape installation. Project construction is anticipated to occur over approximately 30 months, with completion anticipated in 2022. It is estimated that grading would require approximately 23,500 cubic yards of soil removal and export.[6] As part of the Project, a Construction Traffic Management Plan would be implemented, subject to City review and approval, to minimize potential conflicts affecting local circulation and surrounding uses.

8. Necessary Approvals

The City of Long Beach has the principal responsibility for approving the Project. Approvals required for development of the Project may include, but not be limited to, the following:

- Site Plan Review;
- Local Coastal Development Permit;[7] and
- Other discretionary and ministerial permits and approvals that may be deemed necessary, including but not limited to temporary street closure permits, grading permits, excavation permits, a haul route permit, foundation permits, and building permits.

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[6] *Final earthwork numbers may change based on soil conditions.*

[7] *Pursuant to the LBMC Section 21.25.902, "The Coastal Zone Boundaries are indicated on the official zone map." The City's Coastal Zone Map shows that the Project Site falls within the Coastal Appealable Area of the City's permit jurisdiction, which gives the Planning Commission (or City Council, upon appeal) the authority to issue coastal development permit approval. Local approval of a coastal development permit may be appealed to the California Coastal Commission pursuant to LBMC Section 21.25.908.*

III. Environmental Setting

III. Environmental Setting

A. Overview of Environmental Setting

This section of the Draft EIR provides an overview of the existing regional and local setting in which the Project Site is located and a brief description of the existing conditions at the Project Site. Detailed environmental setting information is provided in each of the environmental issue analyses found in Section IV, Environmental Impact Analysis, of this Draft EIR. In addition, Section II, Project Description, of this Draft EIR, provides additional information regarding existing conditions at the Project Site.

1. Project Location and Environmental Setting

The Project Site is located in Downtown Long Beach. Moreover, the Project Site is bounded by East Ocean Boulevard to the north, East Seaside Way to the south, and Pine Avenue to the west.[1] Primary regional access is provided by Interstate 710 (I-710 or Long Beach Freeway), which runs north-south and terminates approximately 0.9 mile west of the Site. Local access to the Project Site is provided via surface streets including Ocean Boulevard and Pine Avenue adjacent to the Project Site.

a. On-Site Conditions

The majority of the Project Site is currently developed with a surface parking lot, consisting of 80 vehicular parking spaces and an automated pay station. There are no habitable structures or landscaping within the parking lot, and concrete retaining walls line the northern and eastern site boundaries. Access to the southern end of the Jergins Trust Tunnel is sealed along the northern retaining wall. The northern part of the Project Site includes a portion of Victory Park, which currently houses a temporary public art project known as “The Loop,” along with seating areas and landscaping. A Long Beach Bike Share station is located at the northwestern corner of the Project Site. One street tree is located along Ocean Boulevard, and eight street trees are located along Pine Avenue adjacent to the Project Site. In addition, a single ingress/egress driveway is located along Seaside Way. The Project Site slopes down towards the south at an approximately

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[1] *For ease of reference, East Ocean Boulevard and East Seaside Way are sometimes referred to herein as Ocean Boulevard and Seaside Way.*

7.9-percent grade, with the Ocean Boulevard elevation approximately 25 feet above Seaside Way.

b. Surrounding Uses

The Project Site is located in an urbanized area surrounded by a variety of primarily commercial land uses. Specifically, to the west of the Project Site across Pine Avenue is the Ocean Center Building, a Long Beach Historic Landmark approved as an adaptive reuse project from commercial to residential use, with commercial and residential uses and associated surface parking further west along Ocean Boulevard. Commercial and office uses also are located immediately northwest of the Project Site, with the Metro Blue Line Downtown Long Beach (Transit Mall) station further to the north on 1st Street. To the north across Ocean Boulevard are the Renaissance Long Beach Hotel and several restaurants. Immediately to the east of the Project Site, separated by a retaining wall, are the Convention Center Walkway and an office building. Further to the east, across Locust Avenue, is the Breakers Hotel building, a Long Beach Historic Landmark, currently under renovation. To the south and southeast across Seaside Way is the Long Beach Convention and Entertainment Center. Various commercial uses including restaurant and retail uses are located to the southwest.

2. Land Use Plans

The Project Site is designated as Land Use District (LUD) No. 7, Mixed Use District, and No. 11, Open Space and Park District, by the City's General Plan. As set forth in the General Plan, uses intended for LUD No. 7 include employment centers, such as retail uses, offices, and medical facilities; higher density residences; visitor-serving facilities; personal and professional services; and recreational facilities. LUD No. 11 includes open space and park areas which are intended to remain or be redeveloped in the future in (essentially) an open condition. The Project Site is located within a coastal zone and is therefore subject to the requirements of the City's Local Coastal Program.

The Project Site is zoned by the Long Beach Municipal Code (LBMC) as Subarea 7 within the Planned Development District 6 (PD-6), Downtown Shoreline Planned Development District (Downtown Shoreline Plan). The Downtown Shoreline Plan specifically identifies residential, hotel, and office uses within Subarea 7 and includes specific requirements pertaining to ancillary uses such as retail uses, restaurants, and art galleries, as well as access, building design, and setbacks. In addition, as the former site of the Jergins Trust Building, the Subarea 7 requirement to provide a corner cut-off at the northeast corner of the site to create a cohesive entry feature to the Promenade South from Pine Avenue applies to the Project.[2]

In addition, the Project Site was formerly owned by the Long Beach Redevelopment Agency (Redevelopment Agency). Prior to the dissolution of the Redevelopment Agency, the Project Site was identified for future development within the Downtown Long Beach Project Area.[3] The Project Site is identified in the approved Successor Agency Long Range Management Plan for "high-density development to maximize overall economic benefit to downtown and in accordance with the use of eminent domain."[4]

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[2] *Per City Ordinance No. ORD-U-0017.*

[3] *Long Beach Redevelopment Agency, "Downtown Long Beach," www.longbeachrda.org/civica/filebank/blobdload.asp?BlobID=2456, accessed January 15, 2019.*

[4] *City of Long Beach, Revised Long Range Property Management Plan, www.lbds.info/documents/Long RangePropMgtPlan/LRPMP.pdf, p. 42, property 113, accessed January 15, 2019.*

III. Environmental Setting

B. Related Projects

California Environmental Quality Act (CEQA) Guidelines Section 15130 requires an EIR to consider the environmental effects of a proposed project individually, as well as cumulatively. As defined in CEQA Guidelines Section 15355, cumulative impacts refer to two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts.

As set forth in CEQA Guidelines Section 15130, the determination of cumulative impacts is generally a two-step process. The first step is to determine whether or not the combined effects from the proposed project and related projects, as identified below, would result in a potentially significant cumulative impact. If the answer is no, then the EIR only briefly needs to indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. If the answer is yes, then the analysis proceeds to the second step, which is to determine whether the proposed project's incremental effects are cumulatively considerable. CEQA Guidelines Section 15065(a)(3) defines "cumulatively considerable" to mean the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. In accordance with CEQA Guidelines Section 15130(a)(3), a project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure(s) designed to alleviate the cumulative impact. In addition, the lead agency is required to identify facts and analyses supporting its conclusion that the contribution will be rendered less than cumulatively considerable. CEQA Guidelines Section 15130(b) further provides that the discussion of cumulative impacts reflect "the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great of detail as is provided for the effects attributable to the project alone." Rather, the discussion is to "be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute." CEQA Guidelines Section 15130(b)(1) states that complying with one of the following two protocols is necessary to provide an adequate discussion of significant cumulative impacts:

1. *A list of past, present, and probable future projects producing related or cumulative impacts including, if necessary, those projects outside the control of the agency; or*

2. *A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates*

conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

Cumulative study areas are defined based on an analysis of the geographical scope relevant to each particular environmental issue. Therefore, the cumulative study area for each individual environmental impact issue may vary. For example, a cumulative land use impact generally may only affect the compatibility of uses within the vicinity of the project site, while a cumulative air quality impact may affect the entire South Coast Air Basin. The specific boundaries and the projected growth within those boundaries for the cumulative study area of each environmental issue are identified in the applicable environmental issue sections in Section IV, Environmental Impact Analysis, of this Draft EIR.

A list of development projects proposed in the general vicinity of the Project that could affect conditions in the Project area (e.g., by adding traffic volumes to study area intersections and/or generating population increases) was prepared based on information obtained primarily from the City of Long Beach Development Services Planning Bureau (Long Beach Planning Bureau). A total of 55 potential related development projects have been identified within the Project vicinity for inclusion in the cumulative impact analysis for this Draft EIR. These related projects are in varying stages of the approval/entitlement/ development process and consist of a variety of land uses reflecting the diverse range of land uses in the Project vicinity. They include primarily residential, commercial/retail, restaurant/entertainment, office, and industrial uses. These related projects would occur primarily as urban infill within the existing land use patterns of the area.

The related projects are listed in Table III-1 on page III-6, which identifies the location of each related project along with the types of proposed land uses. The locations of the related projects are mapped in Figure III-1 on page III-10. It is noted that some of the related projects may not be built out by 2022 (the Project’s buildout year), may ultimately never be built, or may be approved and built at reduced densities. However, to provide a conservative analysis, the future baseline forecast assumes all of the related projects will be fully built out by 2022.

Table III-1
List of Related Projects

Map No.	Project Location	Project Description	Use	Size
1	1628–1724 E. Ocean Blvd.	Add 51-unit condominium to a 47-unit motel.	Condominiums	51 du
2	245 W. Broadway	New mixed-use project on 1.7-acre site.	Residential	219 du
			Retail	6,000 sf
3	2010 Ocean Blvd.	New mixed-use project with shared amenities on a 1.04-acre site.	Residential	33 du
			Hotel	72 rm
4	207 Seaside Way	Apartment building with two levels of parking.	Apartments	117 du
5	100 Aquarium Way	Expand existing aquarium front by 22,642 sf.	Theater Expansion	22,642 sf 300 seats
6	495 The Promenade North	Mixed-Use	Apartments	20 du
			Retail	5,200 sf
7	110 W. Ocean Blvd.	Adaptive reuse conversion of existing 15-story Ocean Center Building from office use to residential. Re-establish retail use on Ocean & Pine.	Residential	74 du
8	150 W. Ocean Blvd.	Apartments	Apartments	216 du
9	1570–1598 Long Beach Blvd.	Mixed-Use	Condominiums	36 du
			Retail	10,000 sf
10	227 Elm Ave.	Develop a vacant parking lot into townhomes.	Townhomes	40 du
11	New Civic Center	Mixed-Use	Residential	580 du
			Office	310,000 sf
			Library	92,000 sf
			Park	3.17 ac
			Hotel	200 rm
			Retail	32,00 sf
			Restaurant	8,000 sf
12	1235 Long Beach Blvd.	Senior and veteran housing with parking garage.	Senior/Veteran Housing	160 du
13	777 Ocean Blvd.	Mixed-Use 35-Story Building	Apartments	315 du
			Retail	6,700 sf
14	507 Pacific Ave.	Mixed-Use Four-Story Building	Residential	134 du
			Retail	7,200 sf
15	230 W. 3rd St.	Mixed-Use (145,506 sf total building area)	Residential	163 du
16	434 E. 4th St.	Mixed-Use	Apartments	49 du
			Retail	1,580 sf
17	825 E. 7th St.	Apartments	Apartments	19 du

Table III-1 (Continued)
List of Related Projects

Map No.	Project Location	Project Description	Use	Size
18	500 W. Broadway	Mixed-Use	Residential	142 du
			Commercial	35,000 sf
19	320 Alamitos Ave.	Apartments with 1.5-Level Subterranean Garage	Apartments	77 du
20	1078, 1080–1090 Atlantic Ave. and 1085–1095 Lime Ave.	New Medical Office Building	Medical Office	11,000 sf
21	1126 Queens Highway	Hotel with 150,000 sf of floor area, restaurants, retail use, theater use, bowling alley, golf venue, museum, and children's museum.	Hotel	200 rm
			Restaurants	150,000 sf
			Retail	38,200 sf
			Movie Theater	150,000 sf
			Bowling Alley	17,000 sf
			Golf Venue	1.2 ac
			Museum	65,300 sf
22	1468 14th St.	Three-story warehouse with covered and uncovered parking.	Warehouse	22,000 sf
23	1795 Long Beach Blvd.	Mixed-Use Five-Story Building	Residential	102 du
			Commercial	3,900 sf
24	245 W. Pacific Coast Hwy.	Mixed-Use	Residential	135 du
			Commercial	25,000 sf
25	107 Long Beach Blvd.	Modification of a previously approved Site Plan Review to allow the installation of 8 car lifts within a five-story hotel with 34 guest rooms.	Hotel Modification	34 rm
26	1400 Long Beach Blvd.	Mixed-Use	Condominiums	65 du
27	3rd Street/Broadway/ Alamo Court/Long Beach Blvd.	Mixed-Use	Apartments	392 du
			Commercial	32,800 sf
28	425 E. 5th St.	Five-Story Apartment Building	Apartments	16 du
29	1900–1940 Long Beach Blvd.	Mixed-Use Five-Story Building	Apartments	95 du
			Retail	12,400 sf
30	1836–1852 Locust Ave.	Affordable housing with commercial space and parking.	Affordable Residential	47 du
			Commercial	3,600 sf
31	135 Linden Ave.	Mixed-Use Seven-Story Building	Apartments	82 du
			Commercial Retail	4,000 sf
32	1901 W. Pacific Coast Hwy.	Industrial Building	Industrial	194,800 sf

Table III-1 (Continued)
List of Related Projects

Map No.	Project Location	Project Description	Use	Size
33	635 Pine Ave. and 636 Pacific Ave.	Mixed-use project located on two adjacent lots intersected by a public alley. The combined area of the lots is approximately 1.04 acres. Project consists of two eight-story buildings with ground floor shell retail space. Buildings will include up to 3 levels of subterranean parking and 5 levels of Type 11 residential units over 3 levels of Type 1 residential units above grade.	Apartments	271 du
			Ground-Floor Retail	1,400 sf
34	1101 Long Beach Blvd.	Mixed-Use	Residential	120 du
			Retail	15,000 sf
35	127–139 E. Broadway	Mixed-Use	Apartments	189 du
			Retail	10,000 sf
36	1675 Santa Fe	Industrial Building	Industrial	21,700 sf
37	2111 W. 14th St.	New industrial manufacturing building.	Manufacturing	38,400 sf
38	1112 Locust Ave.	Residential	Residential	97 du
39	1341 Long Beach Blvd.	Four-Story Apartment Building	Apartments	24 du
40	1401 Long Beach Blvd.	Apartment Building	Apartments	142 du
41	125 Long Beach Blvd.	Mixed-Use	Residential	218 du
			Retail	7,300 sf
42	110 Pine Avenue	Adaptive reuse of bank building into a hotel.	Hotel	189 rm
43	1 & 11 Golden Shore	Mixed-Use	Residential	750 du
			Commercial	11,000 sf
44	1601 San Francisco Ave.	Two Industrial Buildings	Industrial	94,800 sf
45	210 E. Ocean Blvd.	Adaptive reuse of the former Breakers Hotel back to a hotel from a 233-bed congregate care facility.	Hotel	185 rm
46	810 Pine Ave.	Assisted Living	Assisted Living	78 rm
47	131 W. 3rd St.	Mixed-use with 623,323 sf total project floor area.	Residential	366 du
			Ground-Floor Retail	18,000 sf
48	200 W. Ocean	Adaptive reuse of a former Verizon office building into residential building with associated parking.	Residential	106 du
49	231 Windsor Way	Expand existing parking structure by 321,595 sf.	Parking	321,595 sf

Table III-1 (Continued)
List of Related Projects

Map No.	Project Location	Project Description	Use	Size
50	600 W. Broadway	Residential	Residential	694 du
51	469 Pacific Coast Hwy.	Four-Story Affordable Housing	Affordable Housing	39 du
52	700 W. 17th St.	Industrial Building	Industrial	29,700 sf
53	201 W. Pacific Coast Hwy.		Residential	147 du
54	123 W. First St.		Hotel	280 rm
55	101 Alamitos Ave.		Residential	136 du
			Retail	2,600 sf
56	135 Linden Ave.		Residential	82 du
57	432–444 W. Ocean Blvd.		Residential	95 du

ac = acres
du = dwelling units
rm = rooms
sf = square feet
spc = spaces
Source: City of Long Beach and Fehr & Peers, 2019.

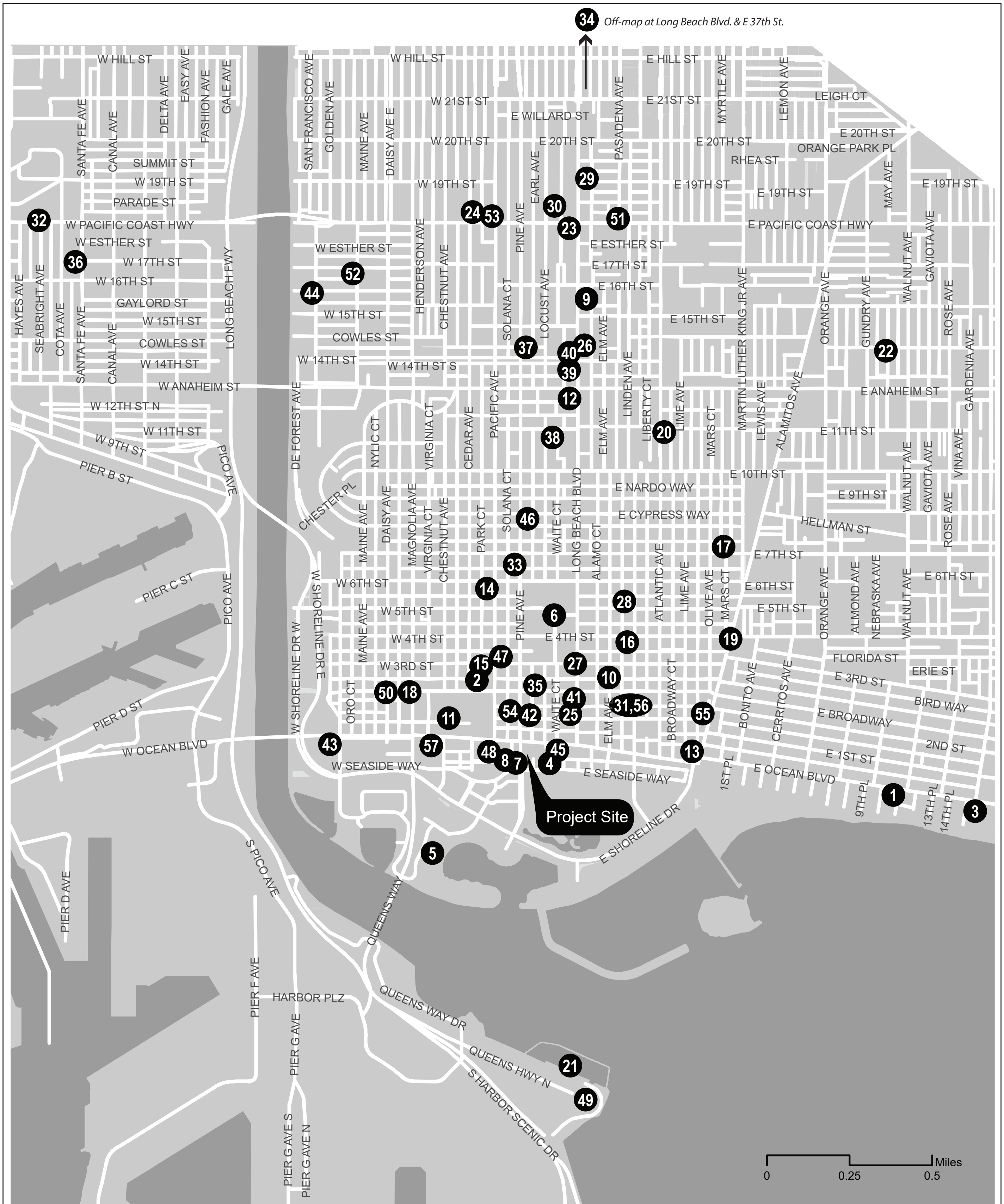

Figure III-1
Location of Related Projects

Source: Eyestone Environmental, 2019;
City of Long Beach Technology & Innovation Department GIS, 2018.

IV. Environmental Impact Analysis

IV. Environmental Impact Analysis

A. Air Quality

1. Introduction

This section of the Draft EIR addresses the air emissions generated by construction and operation of the Project. The analysis also addresses the Project's consistency with the air quality policies set forth within the South Coast Air Quality Management District (SCAQMD)'s Air Quality Management Plan (AQMP) and the City of Long Beach (City) General Plan. The analysis of Project-generated air emissions focuses on whether the Project would cause an exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are included in Appendix B of this Draft EIR.

2. Environmental Setting

a. Air Quality Background

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

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect the public health and welfare. These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them. The national and state standards have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The national and state criteria pollutants and the applicable ambient air quality standards are listed in Table IV.A-1 on page IV.A-3.

b. Air Pollution and Potential Health Effects

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality within the Air Basin. The criteria air pollutants for which national and state standards have been promulgated and which are most relevant to current air quality planning and regulation in the Air Basin include ozone (O_3), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), sulfates, and hydrogen sulfide (H_2S). In addition, volatile organic compounds (VOCs) and toxic air contaminants (TACs) are of concern in the Air Basin. Each of these is briefly described below.

(1) Criteria Pollutants

(a) Ozone (O_3)

O_3 is a gas that is formed when VOCs and nitrogen oxides (NO_X)—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O_3 irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other

Table IV.A-1
Ambient Air Quality Standards

Pollutant	Averaging Period	California Standard[a,b]	Federal Standard[a,b]	SCAQMD Attainment Status[c] California Standard[d]	SCAQMD Attainment Status[c] Federal Standard[e]
Ozone (O_3)	1 hour	0.09 ppm (180 μg/m³)	—	Non-Attainment	—
	8 hour	0.07 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)	Non-Attainment	Non-Attainment (Extreme)
Respirable Particulate Matter (PM_{10})	24 hour	50 μg/m³	150 μg/m³	Non-Attainment	Attainment
	Annual	20 μg/m³	—		
Fine Particulate Matter ($PM_{2.5}$)	24 hour	—	35 μg/m³	Non-Attainment	Non-Attainment (Serious)
	Annual	12 μg/m³	12 μg/m³		
Carbon Monoxide (CO)	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	Attainment	Attainment
	8 hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)		
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm (339 μg/m³)	0.10 ppm (188 μg/m³)	Attainment	Unclassified/ Attainment
	Annual	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)		
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	Attainment	Attainment
	3 hour	—	0.5 ppm (1,300 μg/m³)		
	24 hour	0.04 ppm (105 μg/m³)	0.14 ppm (365 μg/m³)		
	Annual	—	0.03 ppm (80 μg/m³)		
Lead (Pb)	30-day average	1.5 μg/m³	—	Attainment	Partial Non-Attainment[e]
	Rolling 3-month average	—	0.15 μg/m³		
Sulfates	24 hour	25 μg/m³	—	Attainment	—
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 μg/m³)	—	Unclassified	—

ppm = parts per million by volume

μg/m³ = micrograms per cubic meter

[a] *An ambient air quality standard is a concentration level expressed in either parts per million or micrograms per cubic meter and averaged over a specific time period (e.g., 1 hour). The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient air quality standards are expressed as a concentration that is not to be exceeded. Others are expressed as a concentration that is not to be equaled or exceeded.*

Table IV.A-1 (Continued)
Ambient Air Quality Standards

Pollutant	Averaging Period	California Standard[a,b]	Federal Standard[a,b]	SCAQMD Attainment Status[c]	
				California Standard[d]	Federal Standard[e]

[b] *Ambient Air Quality Standards based on the 2016 AQMP.*

[c] *"Attainment" means that the regulatory agency has determined based on established criteria, that the Air Basin meets the identified standard. "Non-attainment" means that the regulatory agency has determined that the Air Basin does not meet the standard. "Unclassified" means there is insufficient data to designate an area, or designations have yet to be made.*

[d] *California standard attainment status based on the 2016 AQMP.*

[e] *Federal standard attainment status based on the 2016 AQMP.*

[e] *An attainment re-designation request is pending.*

Source: Eyestone Environmental, 2019.

respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

(b) Particulate Matter (PM_{10} and $PM_{2.5}$)

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than 10 microns (PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

(c) Carbon Monoxide (CO)

CO is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

(d) Nitrogen Dioxide (NO_2)

NO_2 is a byproduct of fuel combustion and major sources include power plants, large industrial facilities, and motor vehicles. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), which reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. NO_2 also contributes to the formation of PM_{10}. Nitrogen oxides irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_X is as a precursor to the formation of ozone.

(e) Sulfur Dioxide (SO_2)

Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposure to both pollutants leads to higher rates of respiratory illness.

(f) Lead (Pb)

Pb is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

(g) Sulfates (SO_4^2)

SO_4^2 are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

(h) Hydrogen Sulfide (H_2S)

H_2S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the state standard could result in exposure to a very disagreeable odor.

(2) Volatile Organic Compounds (VOCs)

VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the State as toxic air contaminants. While there are no specific VOC ambient air quality standards, VOC is a prime component (along with NO_X) of the photochemical processes by which such criteria pollutants as ozone, nitrogen dioxide, and certain fine particles are formed. They are, thus, regulated as "precursors" to formation of those criteria pollutants.

(3) Toxic Air Contaminants (TACs)

TACs refer to a diverse group of "non-criteria" air pollutants that can affect human health but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and noncarcinogenic, where carcinogenic TACs can cause cancer and noncarcinogenic TAC can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular).

The California Air Resources Board (CARB) and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California.[1] A complete list of these substances is maintained on CARB's website.[2]

Diesel particulate matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the State as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 micrometer [μm]), including a subgroup of ultrafine

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1 *CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both state and federal air pollution control programs within California.*

2 *CARB, Toxic Air Contaminant Identification List, www.arb.ca.gov/toxics/id/taclist.htm, last reviewed by CARB July 18, 2011, accessed June 19, 2019.*

particles (ultrafine particles have a diameter less than 0.1 μm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or “soot.” Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.[3,4]

To provide a perspective on the contribution that DPM has on the overall statewide average ambient air toxics potential cancer risk, CARB evaluated risks from specific compounds using data from CARB’s ambient monitoring network. CARB maintains a 21-site air toxics monitoring network, which measures outdoor ambient concentration levels of approximately 60 air toxics. CARB has determined that, of the top ten inhalation risk contributors, DPM contributes approximately 68 percent of the total potential cancer risk.[5]

c. Regulatory Framework

The Project Site and surrounding vicinity are subject to federal, state, and local air quality laws and regulations. A number of plans and policies have been adopted by various agencies to address air quality concerns. The laws, regulations, plans, and policies that are most relevant to the Project are summarized below.

(1) Criteria Pollutants

(a) Federal

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments in 1990. At the

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[3] *CARB, Overview: Diesel Exhaust and Health, ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health, accessed June 19, 2019.*

[4] *CARB, Fact Sheet: Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results, March 2008.*

[5] *SCAQMD, MATES IV Final Report, 2015.*

federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of some portions of the CAA (e.g., certain mobile source and other requirements). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the National Ambient Air Quality Standard (NAAQS) and require State Implementation Plans (SIP) to demonstrate how they will attain the standards by specified dates. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

Title I provisions are implemented for the purpose of attaining NAAQS. Table IV.A-1 on page IV.A-3 shows the NAAQS currently in effect for each criteria pollutant and their relative attainment status. The Air Basin fails to meet national standards for O_3 and $PM_{2.5}$ and, therefore, is considered a federal "non-attainment" area for these pollutants. In addition, Los Angeles County fails to meet the national standard for lead and, therefore, is considered a federal "non-attainment" area for lead.

Title II of the CAA pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline and automobile pollution control devices are examples of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

(b) State

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. Table IV.A-1 includes the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the State. As shown in Table IV.A-1, the CAAQS include more stringent standards than the NAAQS.[6] The Air Basin fails to meet state standards for O_3, PM_{10}, and $PM_{2.5}$ and, therefore, is considered in "non-attainment" for these pollutants.

(i) Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook* (CARB Handbook) on April 28, 2005 to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions.[7] The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

(ii) California Code of Regulations

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended, or repealed by the state agencies pursuant to the Administrative Procedure Act. The CCR includes regulations that pertain to air quality emissions. Specifically, CCR Title 13, Section 2485 states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location. In addition, CCR Title 17, Section 93115 states that operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

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[6] *However, on August 24, 2018, the USEPA and the National Highway Traffic Safety Administration (NHTSA) published a proposal to revoke California's waiver under the Clean Air Act to establish more stringent standards than the federal standards.*

[7] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

(c) Regional

(i) South Coast Air Quality Management District (SCAQMD)

SCAQMD shares responsibility with CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained throughout all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County and 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. The Air Basin is a subregion of SCAQMD's jurisdiction.

To meet the CAAQS and NAAQS, SCAQMD has adopted a series of Air Quality Management Plans (AQMPs). The 2016 AQMP, which was released in March 2017, incorporates the latest scientific and technological information and planning assumptions, including the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS) and updated emission inventory methodologies for various source categories.[8] The 2016 AQMP also includes the new federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

The AQMP provides emissions inventories, ambient measurements, meteorological episodes, and air quality modeling tools. The AQMP also provides policies and measures to guide responsible agencies in achieving federal standards for healthful air quality in the Air Basin. It incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation. For example, SCAQMD Rule 403 requires the implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with new development projects within the Air Basin, such as the Project. Instead, SCAQMD

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[8] *SCAG, 2016–2040 RTP/SCS.*

published the *CEQA Air Quality Handbook* in November 1993 to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects proposed in the Air Basin. The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*.[9]

In order to assist the CEQA practitioner in conducting air quality analyses in the interim while the replacement *Air Quality Analysis Guidance Handbook* is prepared, supplemental guidance/information is provided on the SCAQMD website and includes: (1) EMFAC on-road vehicle emission factors; (2) background CO concentrations; (3) localized significance thresholds; (4) mitigation measures and control efficiencies; (5) mobile source toxics analysis; (6) off-road mobile source emission factors; (7) $PM_{2.5}$ significance thresholds and calculation methodology; and (8) updated SCAQMD Air Quality Significance Thresholds.[10] SCAQMD also recommends using approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod). These recommendations were followed in the preparation of this analysis.

SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TAC emissions.[11] SCAQMD's siting distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). SCAQMD's document introduces land use-related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

The following SCAQMD rules and regulations are applicable to the Project:

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[9] *SCAQMD, Air Quality Analysis Handbook, www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook, accessed June 19, 2019.*

[10] *SCAQMD, Air Quality Analysis Handbook, www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook, accessed June 19, 2019.*

[11] *SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.*

- SCAQMD Rule 402 (Nuisance) prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

- SCAQMD Rule 403 requires projects to incorporate fugitive dust control measures at least as effectively as the following measures:

  – Use watering to control dust generation during the demolition of structures;

  – Clean-up mud and dirt carried onto paved streets from the site;

  – Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;

  – All haul trucks would be covered or would maintain at least 6 inches of freeboard;

  – All materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of spillage or dust;

  – Suspend earthmoving operations or additional watering would be implemented to meet Rule 403 criteria if wind gusts exceed 25 mph;

  – The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable control of dust caused by wind. All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions; and

  – An information sign shall be posted at the entrance to the construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. A construction relations officer shall be appointed to act as a community liaison concerning on-site activity, including investigation and resolution of issues related to fugitive dust generation.

- SCAQMD Rule 1113 limits the volatile organic compound content of architectural coatings.

- SCAQMD Regulation XIII (New Source Review) requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters).

(ii) Southern California Association of Governments (SCAG)

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements, including the Transportation Conformity Rule and other applicable federal, state, and air district laws and regulations. As the federally designated Metropolitan Planning Organization (MPO) for the six-county Southern California region, SCAG is required by law to ensure that transportation activities "conform" to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. In addition, SCAG is a co-producer, with SCAQMD, of the transportation strategy and transportation control measure sections of the AQMP for the Air Basin. With regard to future growth, SCAG has prepared the 2016–2040 RTP/SCS, which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the 2016–2040 RTP/SCS are based in part on projections originating under County and City General Plans. These growth projections were utilized in the preparation of the air quality forecasts and consistency analysis included in the 2016 AQMP.

(d) Local

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

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

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

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

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

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

In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses SCAQMD's *CEQA Air Quality Handbook* as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

(2) Toxic Air Contaminants

(a) State

The California Air Toxics Program was established in 1983, when the California Legislature adopted Assembly Bill (AB) 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air.[12] In the risk identification step, CARB and OEHHA determine if a substance should be formally identified or "listed" as a TAC in California. Since inception of the program, a number of such substances have been listed and include benzene, chloroform, formaldehyde, and particulate emissions from diesel-fueled engines, among others.[13] In 1993, the California Legislature amended the program to identify the 189 federal hazardous air pollutants (HAPs) as TACs.

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

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[12] CARB, California Air Toxics Program, www.arb.ca.gov/toxics/toxics.htm, last reviewed by CARB June 8, 2018, accessed June 19, 2019.

[13] CARB, Toxic Air Contaminant Identification List, www.arb.ca.gov/toxics/id/taclist.htm, last reviewed by CARB July 18, 2011, accessed June 19, 2019.

ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time.

In addition to limiting exhaust from idling trucks, CARB adopted regulations on July 26, 2007 for off-road diesel construction equipment such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles to reduce emissions by installation of diesel particulate filters and encouraging the replacement of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size, and the largest operators began compliance in 2014.[14]

The AB 1807 program is supplemented by the AB 2588 Air Toxics "Hot Spots" program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

The *Air Quality and Land Use Handbook: A Community Health Perspective* provides important air quality information about certain types of facilities (e.g., freeways, refineries, rail yards, ports, etc.) that should be considered when siting sensitive land uses such as residences.[15] CARB provides recommended site distances from certain types of facilities when considering siting new sensitive land uses. The recommendations are advisory and should not be interpreted as defined "buffer zones." If a project is within the siting distance, CARB recommends further analysis. Where possible, CARB recommends a minimum separation between new sensitive land uses and existing sources.

(b) Regional

SCAQMD has adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

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[14] *CARB, In-Use Off-Road Diesel-Fueled Fleets Regulation, www.arb.ca.gov/msprog/ordiesel/ordiesel.htm, last reviewed by CARB March 5, 2019, accessed June 19, 2019.*

[15] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

d. Existing Air Quality Conditions

(1) Regional Air Quality

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

The greatest air pollution throughout the Air Basin occurs from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. O_3 concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in Southern California. However, as discussed earlier, the Air Basin fails to meet the national standards for O_3 and $PM_{2.5}$ as well as the state standards for O_3, PM_{10}, and $PM_{2.5}$. In addition, Los Angeles County still to meet the national standard for lead.

SCAQMD has released an Air Basin-wide air toxics study (MATES-IV).[16] The MATES-IV Study was aimed at estimating the cancer risk from toxic air emissions throughout the Air Basin by conducting a comprehensive monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to fully characterize health risks for those living in the Air Basin. The MATES-IV Study concluded that the average carcinogenic risk from air pollution in the Air Basin is approximately 420 in one million over a 70-year duration. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 68 percent of the risk is attributed to diesel particulate emissions, approximately 21 percent to other toxics associated with mobile sources (including benzene, butadiene, and carbonyls), and approximately 11 percent of all carcinogenic risk is attributed to stationary sources (which include large

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[16] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) Final Report, May 2015.*

industrial operations, such as refineries and metal processing facilities, as well as smaller businesses, such as gas stations and chrome plating).

As part of the MATES-IV Study, SCAQMD prepared a series of maps that shows regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps' estimates represent the number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years) in parts of the area. The MATES-IV map is the most recently available map to represent existing conditions near the Project area. The estimated cancer risk for the vast majority of the urbanized area within the Air Basin ranges from 200 to over 1,200 cancers per million over a 70-year duration.[17] Generally, the risk from air toxics is lower near the coastline and higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

(2) Local Air Quality

Air pollutant emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial and industrial activity, space and water heating, landscape maintenance, consumer products, and mobile sources primarily consisting of automobile traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

(a) Existing Pollutant Levels at Nearby Monitoring Stations

SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin and has divided the Air Basin into 27 source receptor areas (SRAs) in which 31 monitoring stations operate. Figure IV.A-1 on page IV.A-18 shows the locations of the SRAs located in central Los Angeles County. The Project Site is located in SRA 4. The monitoring station most representative of the Project Site is Station Number 033, which is located at 2425 Webster Street, approximately 2.94 miles northwest of the Project Site. Criteria pollutants monitored at this station include O_3, CO, NO_2, and SO_2. The next closest monitoring station to the Project Site is the South Long Beach Monitoring Station (South Coastal Los Angeles County 2), Station Number 077, which is located at 1305 East Pacific Coast Highway, approximately 3.65 miles northwest of the Project Site. Criteria pollutants monitored at this station include PM_{10}, $PM_{2.5}$, lead, and sulfate. Table IV.A-2 on page IV.A-19 identifies the national and state ambient air quality standards for criteria air pollutants along with the ambient pollutant concentrations that have been measured in SRA 4 during the period of 2015 to 2017 (the most recent annual data available).

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17 *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV), MATES IV Interactive Carcinogenicity Map, 2015, www3.aqmd.gov/webappl/OI.Web/OI.aspx?jurisdictionID=AQMD.gov&shareID=73f55d6b-82cc-4c41-b779-4c48c9a8b15b, accessed February 1, 2019.*

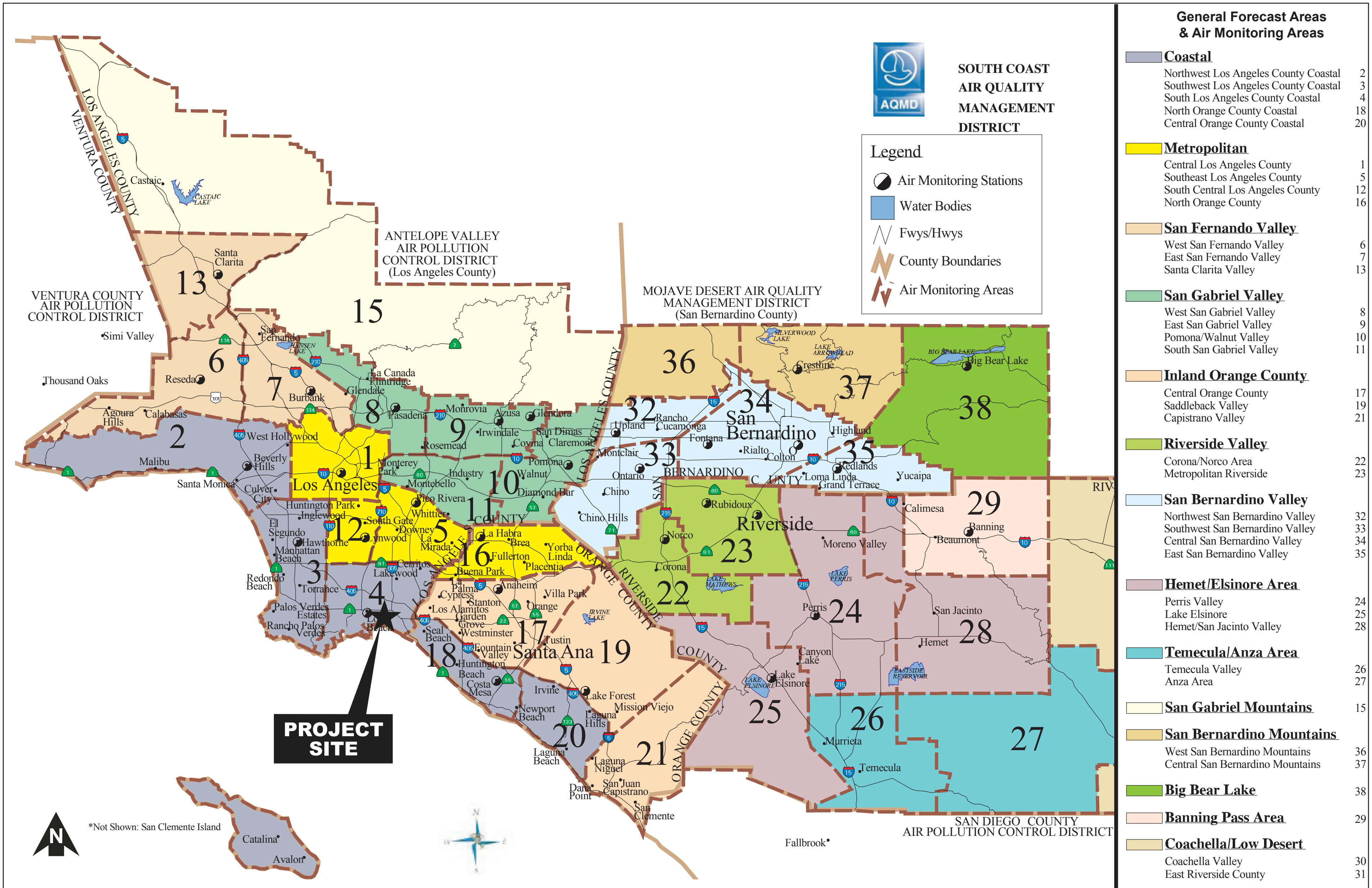

Figure IV.A-1
SCAQMD SRAs

Source: Sierra Wade Associates, 2010.

Table IV.A-2
Summary of Ambient Air Quality in the Project Vicinity

Pollutant	Year		
	2015	2016	2017
Ozone (O_3)			
Maximum 1-hour Concentration (ppm)	0.087	0.079	0.082
Days exceeding CAAQS (0.09 ppm)	0	0	0
Maximum 8-hour Concentration (ppm)	0.066	0.059	0.068
Days exceeding NAAQS (0.070 ppm)	0	0	0
Days exceeding CAAQS (0.07 ppm)	0	0	0
Respirable Particulate Matter (PM_{10})			
Maximum 24-hour Concentration (μg/m^3)	62	56	57
Days exceeding NAAQS (150 μg/m^3)	0	0	0
Days exceeding CAAQS (50 μg/m^3)	2	3	9
Annual Arithmetic Mean (μg/m3)	26.5	27.8	33.3
Does measured AAM exceed CAAQS (20 μg/m^3)?	**Yes**	**Yes**	**Yes**
Fine Particulate Matter ($PM_{2.5}$)			
Maximum 24-hour Concentration (μg/m^3)	48.3	28.9	56.3
Days exceeding NAAQS (35 μg/m^3)	4	0	0
Annual Arithmetic Mean (μg/m^3)	10.3	9.62	11.0
Does measured AAM exceed NAAQS (12 μg/m^3)?	No	No	No
Does measured AAM exceed CAAQS (12 μg/m^3)?	No	No	No
Carbon Monoxide (CO)			
Maximum 1-hour Concentration (ppm)	3	3	3
Days exceeding NAAQS (35.0 ppm)	0	0	0
Days exceeding CAAQS (20.0 ppm)	0	0	0
Maximum 8-hour Concentration (ppm)	2.2	2.2	2.6
Days exceeding NAAQS (9 ppm)	0	0	0
Days exceeding NAAQS and CAAQS (9.0 ppm)	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour Concentration (ppm)	0.10	0.10	0.10
Days exceeding CAAQS (0.18 ppm)	0	0	0
Annual Arithmetic Mean (ppm)	0.020	0.020	0.018
Does measured AAM exceed NAAQS (0.0534 ppm)?	No	No	No
Does measured AAM exceed CAAQS (0.03 ppm)?	No	No	No
Sulfur Dioxide (SO_2)			
Maximum 1-hour Concentration (ppm)	0.04	0.02	0.02
Days exceeding CAAQS (0.25 ppm)	0	0	0
Maximum 24-hour concentration (ppm)	0.003	—	—
Days exceeding CAAQS (0.04 ppm)	0	0	0
Days exceeding NAAQS (0.14 ppm)	0	0	0

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Summary of Ambient Air Quality in the Project Vicinity

Pollutant	Year		
	2015	**2016**	**2017**
Annual Arithmetic Mean (ppm)	0.001	—	—
Does measured AAM exceed NAAQS (0.030 ppm)?	No	No	No
Lead			
Maximum 30-day Average Concentration (μg/m^3)	0.01	0.01	0.01
Does measured concentration exceed NAAQS (1.5 μg/m^3)	No	No	No
Maximum Calendar Quarter Concentration (μg/m^3)	0.01	0.01	0.01
Does measured concentration exceed CAAQS (1.5 μg/m^3)	No	No	No
Sulfate			
Maximum 24-hour Concentration (μg/m^3)	6.1	6.3	3.1
Does measured concentration exceed CAAQS (25 μg/m^3)	No	No	No

ppm = parts per million by volume
μg/m^3 = micrograms per cubic meter
AAM = annual arithmetic mean
— = not available
Source: South Coast Air Quality Management District, Ambient Monitoring Data (2015–2017).

(b) Existing Health Risk in the Surrounding Area

As shown in Figure IV.A-2 on page IV.A-21, based on the MATES-IV model, the calculated cancer risk in the Project area is approximately 1,731.62 in a million.[18] The cancer risk in this area is predominately related to nearby sources of diesel particulate (e.g., the Port of Long Beach and Interstates 710, 605, and 405). In general, the risk at the Project Site is comparable with other urbanized areas in the Long Beach area that are near large diesel sources (e.g., freeways, airports, and ports).

(c) Surrounding Uses

As shown in Figure IV.A-3 on page IV.A-22, the Project Site is located in an urbanized area and is surrounded by a variety of land uses. As discussed in Section II, Project Description, of the Draft EIR, to the west across Pine Avenue is the Ocean Center Building, an office building and Long Beach Historic Landmark, with commercial and

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[18] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV), MATES IV Interactive Carcinogenicity Map, 2015, www3.aqmd.gov/webappl/OI.Web/OI.aspx?jurisdictionID=AQMD.gov&shareID=73f55d6b-82cc-4c41-b779-4c48c9a8b15b, accessed February 1, 2019.*

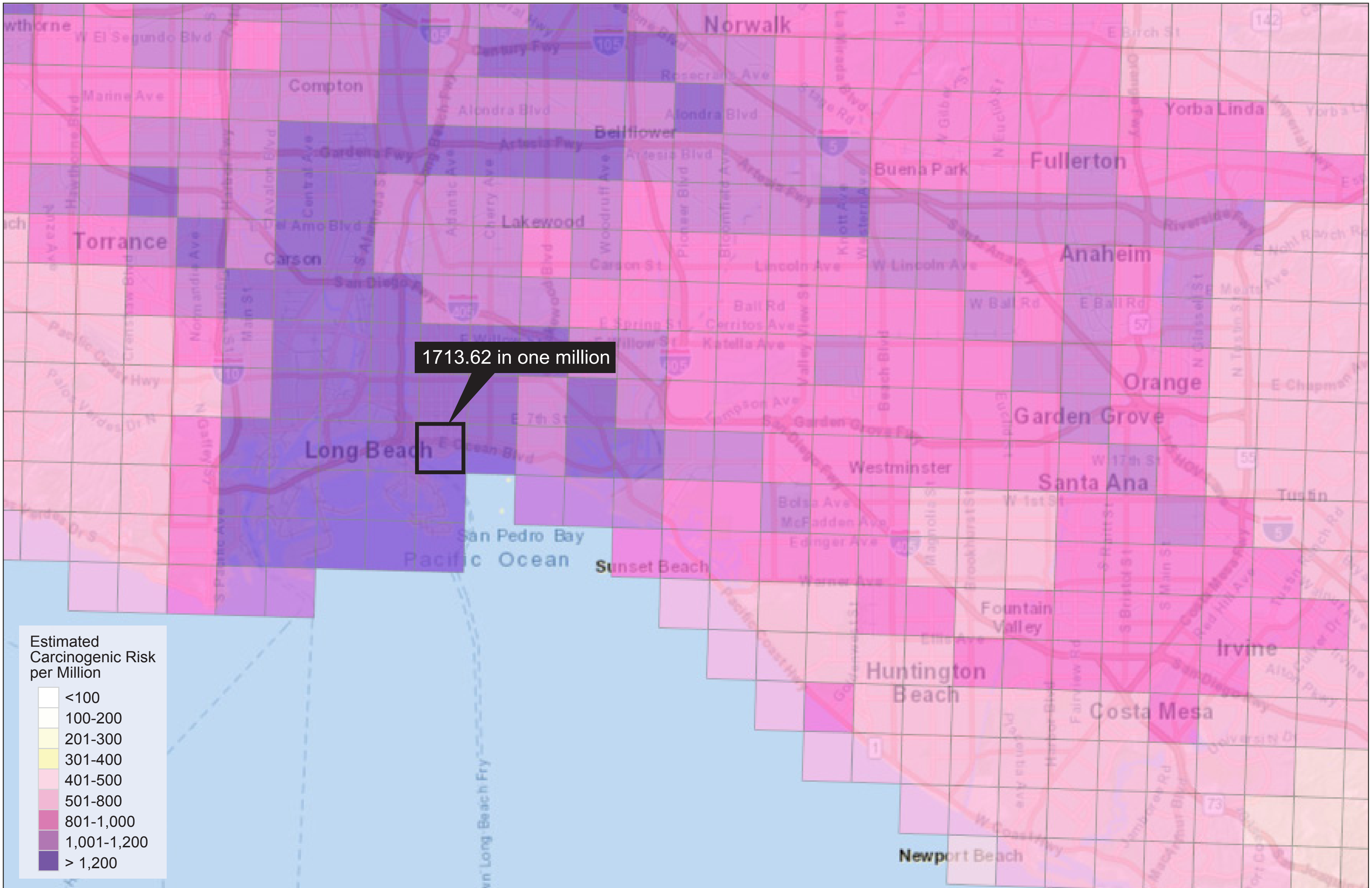

Figure IV.A-2
MATES IV Total Cancer Risk for Project Area

Source: South Coast AQMD, 2016.

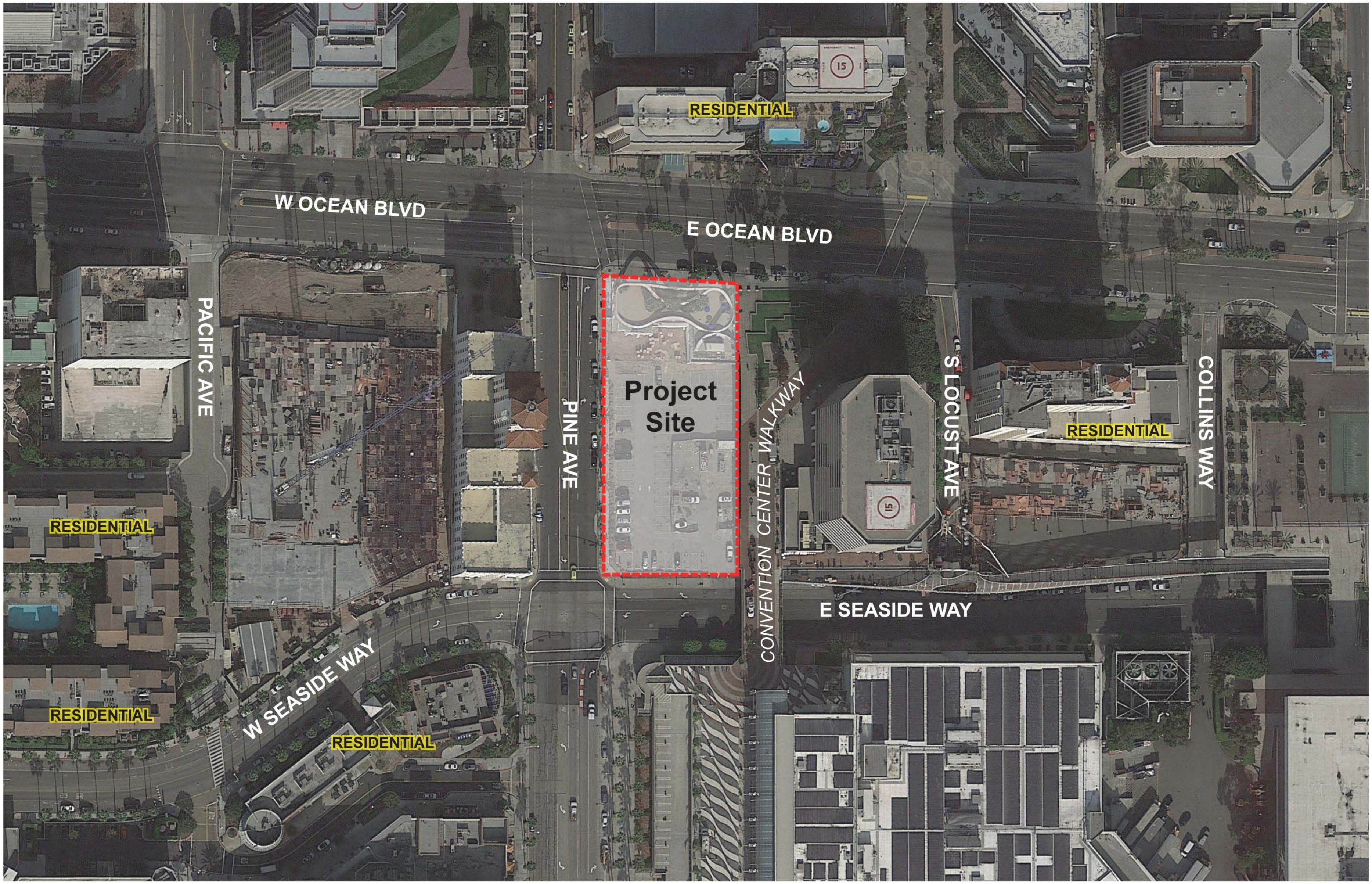

Figure IV.A-3
Air Quality Sensitive Receptors

Source: Google Earth, 2018; Eyestone Environmental, 2018.

residential uses and associated surface parking further west along Ocean Boulevard. Commercial and office uses also are located immediately northwest of the Project Site, with the Metro Blue Line Downtown Long Beach (Transit Mall) station further to the north on 1st Street. To the north across Ocean Boulevard are the Renaissance Long Beach Hotel and several restaurants. Immediately to the east of the Project Site, separated by a retaining wall, are the Convention Center Walkway and an office building. Further to the east across Locust Avenue is the Breakers Hotel building, a Long Beach Historic Landmark, which is largely vacant at the present time. To the south and southeast, across Seaside Way, is the Long Beach Convention and Entertainment Center. Various commercial uses including restaurant and retail uses are located to the southwest. As shown in Figure IV.A-3 on page IV.A-22, the nearest sensitive receptors to the Project Site are residential uses located west of the site (approximately 450 feet or roughly 150 meters).[19,20]

(d) Existing Project Site Emissions

The majority of the Project Site is currently developed with a surface parking lot, consisting of 80 vehicular parking spaces and an automated pay station. There are no habitable structures or landscaping within the parking lot, and concrete retaining walls line the northern and eastern site boundaries. Mobile source emissions generated by motor vehicle trips to and from the Project Site are assumed to be associated with surrounding/nearby land uses and not the surface parking lot (i.e., there would be no vehicle trips to the surface parking lot without the surrounding/nearby land uses). Thus, existing operation of the Project Site is not considered to be a substantial source of pollutant emissions. To present a conservative analysis of the Project, the existing emissions from the Project Site were assumed to be zero.

3. Environmental Impacts

a. Methodology

This analysis focuses on the potential change in the air quality environment due to implementation of the Project. Air pollutant emissions would result from both Project construction and operation. Specific methodologies used to evaluate these emissions are discussed below.

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[19] *The hotel north of the Project Site is not considered a sensitive receptor with respect to air quality.*

[20] *SCAQMD LST thresholds are given in 25-meter increments.*

(1) Construction Emissions Methodology

(a) Regional Emissions

Daily regional emissions during construction were forecasted based on the proposed construction schedule and applying the mobile source and fugitive dust emissions factors derived from the SCAQMD recommended CalEEMod. As discussed in more detail below, the Project will include a mat foundation which requires a continuous concrete pour involving up to 415 truck loads of concrete per day for two days. During the mat foundation phase, concrete would be poured continuously without stopping in order to achieve the strength required for the building foundation. In order to reduce Project-related construction emissions, concrete trucks used during the mat foundation phase will be model year 2007 or newer. Quantifying the reduction of pollutant emissions goes beyond the capabilities within CalEEMod (i.e., no model input for selection of specific model year vehicles). In order to properly characterize the emissions from the concrete mat foundation phase, truck emissions were calculated in a spreadsheet using the same methodology contained in CalEEMod, with emission factors from CARB's EMFAC model. Paved road dust was calculated using USEPA AP-42 equations, consistent with CalEEMod methodology.

Within CalEEMod, truck emissions are calculated for idling, engine startup, and travelling (running) activities. During the continuous concrete pour, the Project would use approximately 100 trucks running in a continuous loop between the Project Site and the concrete batch plant. Trucks were assumed to start once per day (cold start) and run continuously. Due to the nature of the continuous concrete pour, the concrete trucks are not expected to shut off engines for an extended duration. Trucks were assumed to idle for 10 minutes per load, which includes five minutes associated with both loading and unloading activities, in compliance with the CARB ATCM to limit diesel-fueled commercial motor vehicle idling.

Details of the modeling assumptions and emission factors are provided in Appendix B of this Draft EIR. The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment that would be used to remove the existing pavement, grade the Project Site, construct the proposed building and related improvements, and plant new landscaping within the Project Site.

(b) Localized Emissions

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the Project according to SCAQMD's localized significance thresholds (LST) methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling, where appropriate.[21] SCAQMD provides LSTs applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. Since VOCs are not a criteria pollutant, there is no ambient standard or SCAQMD LST for VOCs. Due to the role VOCs play in O_3 formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established. SCAQMD does not provide an LST for SO_2 since land use development projects typically result in negligible construction and long-term operation emissions of this pollutant.

LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The mass rate look-up tables were developed for each source receptor area and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. SCAQMD provides LST mass rate look-up tables for projects with active construction areas that are less than or equal to 5 acres. If the project exceeds the LST look-up values, then SCAQMD recommends that project specific air quality modeling must be performed.

(2) Operational Emissions Methodology

(a) Regional Emissions

Analysis of the Project's projected impact on regional air quality during long-term Project operations (i.e., after construction is complete) takes into consideration four types of sources: (1) area; (2) energy; (3) mobile; and (4) stationary. Area source emissions are generated by, among other things, landscape equipment, fireplaces, and the use of consumer products. Energy source emissions are generated as a result of activities in buildings for which natural gas is used (e.g., natural gas for heat or cooking). Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the Project. Stationary source emissions are generated from proposed emergency generators during routine maintenance/testing.

Similar to construction, SCAQMD's CalEEMod software was used for the evaluation of Project emissions during operation. CalEEMod was used to calculate on-road fugitive dust, architectural coatings, landscape equipment, energy use, mobile source, and stationary source emissions. To determine if a significant air quality impact would occur,

[21] *SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-Up Table, October 2009.*

the net increase in regional operational emissions generated by the Project was compared against SCAQMD's significance thresholds.[22]

(b) Localized Emissions

(i) On-Site Emissions

Localized impacts from Project operations include on-site emissions (e.g., combustion from natural gas usage) which are calculated using SCAQMD's recommended CalEEMod and evaluation of these emissions consistent with SCAQMD's LST methodology.

(ii) Off-Site Emissions

Potential localized CO concentrations from induced traffic at nearby intersections are also addressed consistent with the methodologies and assumptions used in the consistency analysis provided in the 2003 AQMP.

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections.[23,24,25] Accordingly, vehicle emissions standards have become increasingly more stringent. Before the first vehicle emission regulations, cars in the 1950s were typically emitting about 87 grams of CO per mile.[26]

Since the first regulation of CO emissions from vehicles (model year 1966) in California, vehicle emissions standards for CO applicable to light duty vehicles have decreased by 96 percent for automobiles, and new cold weather CO standards have been implemented, effective beginning with the 1996 model year.[27,28,29] Currently, the CO

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22 *SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015. SCAQMD based these thresholds, in part, on the federal Clean Air Act and, to enable defining "significant" for CEQA purposes, defined the setting as the South Coast Air Basin. (See SCAQMD, CEQA Air Quality Handbook, April 1993, pp. 6-1–6-2.).*

23 *USEPA, Air Quality Criteria for Carbon Monoxide, 2000, EPA 600/P-099/001F.*

24 *SCAQMD, CEQA Air Quality Handbook, 1993, Section 4.5.*

25 *SCAQMD, Air Quality Management Plan, 2003.*

26 *USEPA, Milestone in Auto Emissions Control, Fact Sheet, August 1994.*

27 *National Academy Board on Energy and Environmental Systems, Review of the 21st Century Truck Partnership, 2008, Appendix D: Vehicle Emission Regulations [excerpt from www.nap.edu/read/12258/chapter/13, accessed June 19, 2019].*

28 *Kavanagh, Jason, Untangling U.S. Vehicle Emissions Regulations, 2008.*

29 *Title 13, CCR, Section 1960.1(f)(2) [for 50,000 mile half-life].*

standard in California is a maximum of 3.4 grams/mile for passenger cars (with provisions for certain cars to emit even less).[30] With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations in the South Coast Air Basin have steadily declined.

The analysis prepared for CO attainment in the Air Basin by SCAQMD can be used to assist in evaluating the potential for CO exceedances in the Air Basin. CO attainment was thoroughly analyzed as part of the 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan).[31] As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in the Los Angeles region at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which had a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.[32] The Los Angeles County Metropolitan Transportation Authority evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be Level E at peak morning traffic and Level F at peak afternoon traffic.[33] If a project intersection does not exceed 400,000 vehicles per day, then the project does not need to prepare a detailed CO hot spot analysis using the CALINE4 model.

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[30] *CARB, California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles, amended September 27, 2010.*

[31] *SCAQMD, Federal Attainment Plan for Carbon Monoxide, 1992.*

[32] *Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).*

[33] *Metropolitan Transportation Authority, Congestion Management Program for Los Angeles County, 2004, Exhibit 2-6 and Appendix A.*

(3) Toxic Air Contaminants Impacts (Construction and Operations)

Potential TAC impacts are evaluated by conducting a qualitative analysis consistent with the CARB Handbook followed by a more detailed analysis (i.e., dispersion modeling), as necessary. The qualitative analysis consists of reviewing the Project to identify any new or modified TAC emissions sources. If the qualitative evaluation does not rule out significant impacts from a new source, or modification of an existing TAC emissions source, a more detailed analysis is conducted. For the detailed analysis, downwind sensitive receptor locations are identified, and site-specific dispersion modeling is conducted to estimate Project impacts.

b. Thresholds of Significance

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to air quality. These questions are as follows:

Would the project:

- Conflict with or obstruct implementation of the applicable air quality plan?
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? Expose sensitive receptors to substantial pollutant concentrations?
- Create objectionable odors affecting a substantial number of people?

(1) Construction

In the context of the questions above from Appendix G of the CEQA Guidelines, the thresholds of significance for construction air quality emissions are based on the thresholds set forth by SCAQMD. Specifically, based on criteria set forth in SCAQMD's *CEQA Air Quality Handbook*, the Project would have a significant impact with regard to construction emissions if any of the following would occur:[34]

[34] *SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015.*

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 100 pounds per day for NO_X; (2) 75 pounds a day for VOC; (3) 150 pounds per day for PM_{10} or SO_X; (4) 55 pounds per day for $PM_{2.5}$; and (5) 550 pounds per day for CO.

- Maximum on-site daily localized emissions exceed the Localized Significance Thresholds (LST), resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 ppm [23,000 μg/m^3] over a 1-hour period or 9.0 ppm [10,350 μg/m^3] averaged over an 8-hour period) and NO_2 (0.18 ppm [338.4 μg/m^3] over a 1-hour period, 0.1 ppm [188 μg/m^3] over a three-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm [56.4 μg/m^3] averaged over an annual period).

- Maximum on-site localized PM_{10} or $PM_{2.5}$ emissions during construction exceed the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed the incremental 24-hr threshold of 10.4 μg/m^3 or 1.0 μg/m^3 PM_{10} averaged over an annual period.

(2) Operational Emissions

In the context of the questions from Appendix G of the CEQA Guidelines, the thresholds of significance for operational air quality emissions are based on the thresholds set forth by SCAQMD. Specifically, based on criteria set forth in SCAQMD's *CEQA Air Quality Handbook*, the Project would have a significant impact with regard to operational emissions if any of the following would occur:[35]

- Operational emissions exceed any of the following SCAQMD prescribed threshold levels: (1) 55 pounds a day for VOC; (2) 55 pounds per day for NO_X; (3) 550 pounds per day for CO; (4) 150 pounds per day for PM_{10} or SO_X; and (5) 55 pounds per day for $PM_{2.5}$.

- Maximum on-site daily localized emissions exceed the Localized Significance Thresholds (LST), resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 parts per million (ppm) over a 1-hour period or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm averaged over an annual period). [36]

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[35] *SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015.*

[36] *SCAQMD, Final Localized Significance Threshold Methodology, revised July 2008.*

- Maximum on-site localized operational PM_{10} and $PM_{2.5}$ emissions exceed the incremental 24-hr threshold of 2.5 μg/m^3 or 1.0 μg/m^3 PM_{10} averaged over an annual period.[37]

- The project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively; or

- The project creates an odor nuisance pursuant to SCAQMD Rule 402 (i.e., objectionable odor at the nearest sensitive receptor).

(3) Toxic Air Contaminants

In the context of the questions from Appendix G of the CEQA Guidelines, the thresholds of significance for toxic air contaminant emissions are based on the thresholds set forth by SCAQMD. Specifically, based on criteria set forth in SCAQMD's *CEQA Air Quality Handbook*, the Project would have a significant impact with regard to toxic air contaminant emissions if any of the following would occur:[38]

- The Project emits carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0.[39] For projects with a maximum incremental cancer risk between 1 in one million and 10 in one million, a project would result in a significant impact if the cancer burden exceeds 0.5 excess cancer cases.

- Hazardous materials associated with on-site stationary sources result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.

- The Project would be occupied primarily by sensitive individuals within 0.25 mile of any existing facility that emits air toxic contaminants which could result in a health risk for pollutants identified in District Rule 1401.

- The Project would result in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0. For projects with a maximum incremental cancer risk between 1 in one million and 10 in one million,

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[37] *SCAQMD, Final—Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds, October 2006.*

[38] *SCAQMD, SCAQMD Air Quality Significance Thresholds, revised March 2015.*

[39] *Hazard index is the ratio of a toxic air contaminant's concentration divided by its Reference Concentration, or safe exposure level. If the hazard index exceeds one, people are exposed to levels of TACs that may pose noncancer health risks.*

a project would result in a significant impact if the cancer burden exceeds 0.5 excess cancer cases.

(4) Consistency with Applicable Air Quality Plans

CEQA Guidelines Section 15125 requires an analysis of project consistency with applicable governmental plans and policies. In accordance with SCAQMD's *CEQA Air Quality Handbook*, the following criteria were used to evaluate the Project's consistency with SCAQMD and SCAG regional plans and policies, including the AQMP:[40]

- Will the Project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?
- Will the Project exceed the assumptions utilized in preparing the AQMP?
  - Is the Project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
  - Does the Project include air quality mitigation measures; or
  - To what extent is Project development consistent with the AQMP land use policies?

The Project's impacts with respect to these criteria are discussed to assess the consistency with SCAQMD's AQMP and SCAG's regional plans and policies. In addition, the Project's consistency with the City of Long Beach General Plan Air Quality Element is discussed.

With regard to the above questions from CEQA Guidelines Appendix G, as discussed in the Initial Study prepared for the Project, which is included as Appendix A of this Draft EIR, no objectionable odors are anticipated as a result of either construction or operation of the Project. Therefore, no further analysis regarding this significance threshold is provided below.

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[40] *SCAQMD, CEQA Air Quality Handbook, April 1993, p. 12-3.*

c. Project Design Features

The following Project design features pertaining to air quality, which are required in compliance with regulatory requirements, would be implemented as part of the Project:

Project Design Feature AIR-1: In accordance with South Coast Air Quality Management District Rule 403, the Project shall incorporate fugitive dust control measures at least as effective as the following measures:

- Use watering to control dust generation during the demolition of structures;
- Clean-up mud and dirt carried onto paved streets from the site;
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- All haul trucks would be covered or would maintain at least 6 inches of freeboard;
- All materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of spillage or dust;
- Suspend earthmoving operations or additional watering would be implemented to meet Rule 403 criteria if wind gusts exceed 25 mph;
- The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable control of dust caused by wind. All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions; and
- An information sign shall be posted at the entrance to the construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. A construction relations officer shall be appointed to act as a community liaison concerning on-site activity, including investigation and resolution of issues related to fugitive dust generation.

Project Design Feature AIR-2: In accordance with California Code of Regulations Title 13, Section 2485, the idling of all on-road diesel-fueled commercial haul and dump trucks (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.

Project Design Feature AIR-3: In accordance with California Code of Regulations Title 17, Section 93115, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

Project Design Feature AIR-4: The Project shall comply with South Coast Air Quality Management District Rule 1113 limiting the volatile organic compound content of architectural coatings.

Project Design Feature AIR-5: The Project shall install odor-reducing equipment in accordance with South Coast Air Quality Management District Rule 1138.

Project Design Feature AIR-6: New on-site facility nitrogen oxide emissions shall be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters) as required by South Coast Air Quality Management District Regulation XIII, New Source Review.

Project Design Feature AIR-7: During the mat pour foundation phase, all trucks hauling concrete shall be model year 2007 or newer.

The Project also would incorporate features to support and promote environmental sustainability which would serve to reduce air pollutant emissions. “Green” principles are incorporated as part of the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013), and the Project has been designed to achieve the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) Silver® certification. Specific energy conservation, water conservation, and waste reduction features are listed in Section II, Project Description, of this Draft EIR.

d. Analysis of Project Impacts

(1) Construction

(a) Regional Construction Impacts

As described in Section II, Project Description, of this Draft EIR, the Project would involve demolition of the existing surface parking lot and construction of a hotel with restaurant and meeting spaces and associated parking. Construction activities would include demolition, excavation, building construction, architectural coatings, and paving. Construction would take place over approximately 30 months, with completion in 2022. During construction, a variety of heavy-duty diesel powered equipment would be used on-site. Building construction and finishing activities would require equipment such as excavators, drill rigs, cranes, concrete pumps, and air compressors. Construction would require demolition of the asphalt parking lot and retaining walls and approximately 23,500 cubic yards of soil removal and export. The Project will require a continuous concrete pour requiring 415 truck loads per day, to be poured over two days. The calculations take into account Project Design Feature AIR-7 which requires use of model year 2007 and newer trucks. As CalEEMod is unable to calculate the emissions reductions due to implementation of Project Design Feature AIR-7, continuous concrete pour emissions were calculated using CARB's EMFAC and spreadsheet methodology. Paved road dust was calculated using USEPA AP-42 equations, consistent with CalEEMod methodology.

Construction of the Project has the potential to create air quality impacts through the use of heavy-duty construction equipment and vehicle trips generated by construction workers traveling to and from the Project Site. In addition, fugitive dust emissions would result from demolition and construction activities. Mobile source emissions, primarily NO_X, would result from the use of construction equipment, such as dozers, loaders, and cranes. During the finishing phase of the building, paving operations and the application of architectural coatings (e.g., paints) and other building materials could potentially release VOCs. The assessment of construction-related air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

The emissions levels presented in Table IV.A-3 on page IV.A-35 represent the highest daily emissions projected to occur during each year of construction. As presented therein, construction-related daily maximum regional construction emissions (i.e., combined on-site and off-site emissions) would not exceed the thresholds for VOC, CO, SO_X, PM_{10}, or $PM_{2.5}$. However, construction emissions would exceed the SCAQMD regional significance thresholds for NO_X, and mitigation measures would be required to reduce emissions to a less than significant level. More specifically, the Project's grading and excavation activities would result in an exceedance of the NO_X regional threshold mainly due to the use of heavy equipment and trucks exporting soil. In order to reduce NO_X emissions to a less than significant level, proposed Mitigation Measure AIR-1, detailed below, would require use of USEPA Tier 4 emissions-compliant excavators and loaders during soil excavation and grading activities. As shown in Table IV.A-3, maximum mitigated regional construction emissions would not exceed SCAQMD significance thresholds. Thus, with mitigation, NO_X emissions would be reduced to a less than significant level.

(b) Localized Impacts from On-Site Construction Activities

In accordance with SCAQMD's methodology, look-up tables provided by SCAQMD were used to determine localized construction emissions thresholds for the

Table IV.A-3
Estimate of Regional Project Construction Emissions (Unmitigated and Mitigated Emissions)[a]
(pounds per day)

Construction Year	VOC[b]	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Unmitigated						
2020	6	102	41	<1	8	3
2020 (Mat Foundation)[c]	8	75	45	<1	4	2
2021	4	17	34	<1	6	2
2022	45	16	33	<1	6	2
Maximum Construction Emissions	**45**	**102**	**45**	**<1**	**8**	**3**
SCAQMD Daily Significance Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Over/(Under)	**(30)**	**2**	**(505)**	**(150)**	**(142)**	**(52)**
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**
Mitigated						
2020	6	84	41	<1	7	2
2010 (Mat Foundation)[c]	8	75	45	<1	4	2
2021	4	15	34	<1	6	2
2022	45	14	33	<1	6	2
Maximum Construction Emissions	**45**	**84**	**45**	**<1**	**7**	**2**
SCAQMD Daily Significance Thresholds	75	100	550	150	150	55
Over/(Under)	**(30)**	**(16)**	**(505)**	**(150)**	**(143)**	**(53)**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *The CalEEMod model printout sheets and/or calculation worksheets are presented in Appendix B of this Draft EIR.*

[b] *Please note that the SCAQMD significance threshold is in terms of VOC while CalEEMod calculates reactive organic compounds (ROG) emissions. For purposes of this analysis, VOC and ROG are used interchangeably since ROG represents approximately 99.9 percent of VOC emissions.*

[c] *The Mat Foundation phase takes into account PDF-AIR-7 which requires Model Year 2007 and newer concrete trucks. This results in a 10% reduction in NOx emissions when accounting for Model Year 2007 and newer trucks.*

Source: Eyestone Environmental, 2019.

Project.[41] LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are based on the most recent background ambient air quality monitoring data (2015–2017) for the Project area, presented in Table IV.A-2 on

[41] *SCAQMD, LST Methodology Appendix C-Mass Rate LST Look-up Table, revised October 2009.*

page IV.A-19. Although the trend shown in Table IV.A-2 on page IV.A-19 demonstrates that ambient air quality is improving in the area, the localized construction emissions analysis conservatively did not apply a reduction in background pollutant concentrations for subsequent years, during which construction would occur (i.e., –2019–2022). By doing so, the allowable pollutant increment to not exceed an ambient air quality standard is more stringent. The analysis is based on existing background ambient air quality monitoring data (2015–2017).

Maximum on-site daily construction emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ were calculated using CalEEMod and compared to the applicable SCAQMD LSTs for SRA 4 based on a construction site area of one acre. As discussed above, the nearest sensitive receptors to Project construction activities are residential uses located west of the site (approximately 450 feet or roughly 150 meters). However, this analysis conservatively assumes an approximately 100-meter or 328-foot receptor distance.

The maximum daily localized emissions from Project construction and the relevant LSTs are presented in Table IV.A-4 on page IV.A-37. As presented therein, construction-related daily maximum localized emissions would not exceed the SCAQMD daily significance thresholds for NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, localized construction emissions resulting from the Project would result in less than significant localized impacts, and no mitigation measures are required.

(c) Toxic Air Contaminants

The greatest potential for TAC emissions during Project construction would be from diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk-assessment methodology. Because the construction schedule estimates that the phases which require the most heavy-duty diesel vehicle usage, such as site grading/excavation, would last for a much shorter duration (e.g., approximately one month), construction of the Project would not result in a substantial, long-term (i.e., 70-year) source of TAC emissions. Additionally, SCAQMD's CEQA guidance does not require a health risk assessment (HRA) for short-term construction emissions. It is, therefore, not necessary to evaluate long-term cancer impacts from construction activities which occur over a relatively short duration. In addition, there would be no residual emissions or corresponding individual cancer risk after construction. As such, Project-related TAC impacts during construction would be less than significant.

Table IV.A-4
Estimate of Localized Project Construction Emissions (Mitigated)
(pounds per day)

Construction Year	NO_X	CO	PM_{10}	$PM_{2.5}$
2020	17	20	1	1
2020 Mat Foundation	22	24	1	<1
2021	13	19	<1	<1
2022	13	19	<1	<1
Maximum Daily Localized Emissions	22	24	1	1
SCAQMD Localized Significance Thresholds[a]	**40**	**1,180**	**29**	**10**
Over/(Under)	**(18)**	**(1,156)**	**(28)**	**(9)**
Exceed Threshold?	**No**	**No**	**No**	**No**

[a] *The SCAQMD LSTs are based on Source Receptor Area No. 4 (SW Coastal LA) for a 1-acre site with a 100-meter (328-foot) receptor distance.*

Source: Eyestone Environmental, 2019.

(2) Operation

(a) Regional Operational Impacts

As discussed above, SCAQMD's CalEEMod was used to calculate regional area, energy, mobile source, and stationary emissions. The Project would incorporate Project design features to support and promote environmental sustainability, as discussed further under Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. While these features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce the emissions of criteria air pollutants discussed herein. Project design features incorporated in this analysis include the Project Site's increase in job density, walkability, accessibility to transit, and the provision of on-site pedestrian improvements, among others.

As shown in Table IV.A-5 on page IV.A-38, the Project would result in an increase in criteria pollutant emissions which would fall below the SCAQMD daily significance thresholds for long-term regional emissions of each of the criteria pollutants. Therefore, impacts associated with regional operational emissions would be less than significant, and no mitigation measures are required.

(b) Localized Impacts from On-Site Operational Activities

Operation of the Project would not introduce any major new sources of air pollution within the Project Site. Emissions estimates for criteria air pollutants from on-site sources

Table IV.A-5
Project Regional Operational Emissions—Project Buildout (2022)
(pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	11	<1	1	<1	<1	<1
Energy (Natural Gas)	<1	4	3	<1	<1	<1
Mobile	7	30	51	<1	9	2
Stationary (Emergency Generator)	<1	1	1	<1	<1	<1
Project Emissions	**19**	**35**	**56**	**<1**	**9**	**3**
SCAQMD Significance Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Over/(Under)	**(36)**	**(20)**	**(494)**	**(150)**	**(141)**	**(52)**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Eyestone Environmental, 2019.

are presented in Table IV.A-6 on page IV.A-39. The SCAQMD LST mass rate look-up tables were used to evaluate potential localized impacts. As shown in Table IV.A-6, on-site operational emissions would not exceed any of the LSTs. Accordingly, localized operational impacts would be less than significant.

(c) CO "Hot Spots" Analysis

Consistent with the CO methodology discussed above, if a project intersection does not exceed 400,000 vehicles per day, then the project need not prepare a detailed CO hot spot analysis.

At buildout of the Project, the highest number of average daily trips at a nearby intersection would be approximately 46,000 at the Alamitos Avenue and Ocean Boulevard intersection, which is significantly below the daily traffic volumes that would be expected to generate CO exceedances as evaluated in the 2003 AQMP.[42] This daily trip estimate is based on the peak-hour conditions at the intersection. There is no reason unique to the Air Basin's meteorology to conclude that the CO concentrations at the Alamitos Avenue and Ocean Boulevard intersection would exceed the 1-hour CO standard if modeled in detail, based on the studies undertaken for the 2003 AQMP.[43] Therefore, the Project does not

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[42] *Fehr & Peers, 100 E. Ocean Boulevard Transportation Impact Study, January 2019; refer to Appendix E.1 of this Draft EIR.*

[43] *It should be noted that CO background concentrations within the vicinity of the modeled intersection have substantially decreased since preparation of the 2003 AQMP. In 2003, the 1-hour background CO concentration was 5 ppm and has decreased to 2 ppm in 2014.*

Table IV.A-6
Project Localized Operational Emissions—Project Buildout (2022)
(pounds per day)

Emission Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	<1	1	<1	<1
Energy (Natural Gas)	4	3	<1	<1
Stationary (Emergency Generator)	1	1	<1	<1
Project Emissions	**6**	**5**	**<1**	**<1**
SCAQMD Significance Threshold[a]	**40**	**1,180**	**7**	**3**
Over/(Under)	**(34)**	**(1,175)**	**(7)**	**(3)**
Exceed Threshold?	**No**	**No**	**No**	**No**

[a] *The SCAQMD LSTs are based on Source Receptor Area No. 4 (SW Coastal LA) for a 1-acre site with a 100-meter (approximately 328-foot) receptor distance.*

Source: Eyestone Environmental, 2019.

trigger the need for a detailed CO hotspots model and would not cause any new or exacerbate any existing CO hotspots. As a result, impacts related to localized mobile-source CO emissions are considered less than significant. The supporting data for this analysis is included in Appendix B of this Draft EIR.

(d) Toxic Air Contaminants

When considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity of land uses that emit TACs. CARB has published and adopted the *Air Quality and Land Use Handbook: A Community Health Perspective*, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities).44 SCAQMD adopted similar recommendations in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*.[45] Together, the CARB and SCAQMD guidelines recommend siting distances for both the development of sensitive land uses in proximity to TAC sources and the addition of new TAC sources in proximity to existing sensitive land uses.

[44] *CARB, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.*

[45] *SCAQMD, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.*

The primary sources of potential air toxics associated with Project operations include DPM from delivery trucks (e.g., truck traffic on local streets and idling on adjacent streets). However, these activities, and the land uses associated with the Project, are not considered land uses that generate substantial TAC emissions. It should be noted that SCAQMD recommends that HRAs be conducted for substantial sources of DPM (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.[46] Based on this guidance, the Project is not considered to be a substantial source of diesel particulate matter warranting a refined HRA since daily truck trips to the Project Site would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units. In addition, the CARB-mandated ATCM limits diesel-fueled commercial vehicles (delivery trucks) to idle for no more than 5 minutes at any given time, which would further limit diesel particulate emissions.

The Project would require the installation of a back-up diesel-powered emergency generator. Any new generator would be required to comply with all applicable rules and regulations including Best Available Control Technology (BACT), which would require the generator to be equipped with a diesel particulate filter. Consistent with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines), the emergency generator would be limited to operate no more than 200 hours a year and only in the event of an emergency power failure or for routine testing and maintenance. Compliance with these rules and regulations would ensure that potential health risk impacts related to the emergency generator would be less than significant.

As the Project would not contain substantial TAC sources and is consistent with the CARB and SCAQMD guidelines, the Project would not result in the exposure of off-site sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0, and potential TAC impacts would be less than significant.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, petroleum refinery). The Project would not include these types of potential industrial manufacturing process sources. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides, etc.) for the types of proposed land uses

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[46] *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2002.*

would be below thresholds warranting further study under California Accidental Release Program (CalARP). As such, the Project would not release substantial amounts of TACs, and impacts on human health would be less than significant.

(3) SCAQMD CEQA Air Quality Handbook Policy Analysis

The following analysis addresses the Project's consistency with applicable SCAQMD and SCAG policies, inclusive of regulatory compliance and the Project design features discussed above. In accordance with the procedures established in the SCAQMD's *CEQA Air Quality Handbook*, the following criteria are required to be addressed in order to determine the Project's consistency with applicable SCAQMD and SCAG policies:

- Would the project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations; or
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Would the project exceed the assumptions utilized in preparing the AQMP?

With respect to the first criterion, as discussed in the preceding Subsection 3.d, localized concentrations of NO_2 as NO_X, CO, PM_{10}, and $PM_{2.5}$ have been analyzed for the Project. Since VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. Due to the role VOCs play in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established. SO_2 emissions would be negligible during construction and long-term operations, and, therefore, would not have the potential to cause or affect a violation of the SO_2 ambient air quality standard.

Particulate matter is the primary pollutant of concern during construction activities, and therefore, the Project's PM_{10} and $PM_{2.5}$ emissions during construction were analyzed: (1) to ascertain potential effects on localized concentrations; and (2) to determine if there is a potential for such emissions to cause or affect a violation of the ambient air quality standards for PM_{10} and $PM_{2.5}$. As shown in Table IV.A-4 on page IV.A-37, the increases in PM_{10} and $PM_{2.5}$ emissions during construction would not exceed the SCAQMD-recommended significance thresholds at sensitive receptors in proximity to the Project Site.

Additionally, the Project's maximum potential NO_X and CO daily emissions during construction were analyzed to ascertain potential effects on localized concentrations and to determine if there is a potential for such emissions to cause or affect a violation of an applicable ambient air quality standard. As shown in Table IV.A-4 on page IV.A-37, NO_X and CO would not exceed the SCAQMD-recommended significance threshold and would not have a long-term impact on the region's ability to meet state and federal air quality standards. Therefore, Project construction would not result in a significant impact with regard to localized air quality.

Because the Project would not introduce any substantial stationary sources of emissions, CO is the preferred benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations.[47] As indicated earlier, no intersections would require a CO hotspot analysis, and impacts would be less than significant. Therefore, the Project would not increase the frequency or severity of an existing CO violation or cause or contribute to new CO violations.

As also discussed above, an analysis of potential localized operational impacts from on-site activities was conducted. As shown above in Table IV.A-6 on page IV.A-39, localized NO_2 as NO_X, CO, PM_{10}, and $PM_{2.5}$ operational impacts would be less than significant. Therefore, the Project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants. As the Project would not exceed any of the state or federal standards, the Project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP.

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2016–2040 RTP/SCS regarding population, housing, and growth trends. Thus, SCAQMD's second criterion for determining consistency focuses on whether or not the Project exceeds the assumptions utilized in preparing the forecasts presented in the AQMP. Determining whether or not a project exceeds the AQMP assumptions involves the evaluation of three criteria: (1) consistency with applicable population, housing, and employment growth projections; (2) Project mitigation measures; and (3) appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis with respect to each of these three criteria.

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[47] *SCAQMD, CEQA Air Quality Handbook, Chapter 12, Assessing Consistency with Applicable Regional Plans, 1993.*

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

A project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2016 AQMP, two sources of data form the basis for the projections of air pollutant emissions: the City of Long Beach General Plan and SCAG's *Regional Transportation Plan* (RTP). The General Plan, which serves as a comprehensive, long-term plan for future development of the City, was originally adopted in 1974.

In April 2016, SCAG adopted the 2016–2040 RTP/SCS. The 2016–2040 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. Refer to Subsection 3.d.4, City of Long Beach Policies, below, for a discussion of the Project's consistency with applicable goals, objectives, and policies of the General Plan Air Quality Element.

As discussed under Checklist Question 13.a of the Initial Study, provided in Appendix A, of this Draft EIR, the Project does not include residential uses and is not expected to result in a residential population increase. With respect to Project operation, the proposed hotel and restaurant uses would include a range of full-time and part-time positions that would likely be filled by persons already residing in the vicinity of the workplace and who generally would not relocate their households for such employment opportunities. As such, the Project would be unlikely to create new households in the area or generate an indirect demand for additional housing. Project-related employment growth would be within the SCAG 2016–2040 RTP/SCS projections, which form the basis of the 2016 AQMP growth projections. Because the Project would be consistent with the land use designations in the General Plan of the City of Long Beach, and more specifically, the Downtown Shoreline Plan (discussed in further detail in Checklist Question 10, Land Use and Planning, of the Initial Study, provided in Appendix A, of this Draft EIR), the Project also would be considered consistent with the region's AQMP. Thus, operation of the Project would have a less than significant impact related to consistency with the AQMP.

- Does the project implement all feasible air quality mitigation measures?

The Project would comply with all applicable regulatory standards as required by SCAQMD, as summarized above. The Project also would incorporate Project design features to support and promote environmental sustainability as discussed under Section IV.C, Greenhouse Gas Emissions, of this Draft EIR. While these features are designed primarily to reduce greenhouse gas emissions, they would also serve to reduce the criteria air pollutants discussed herein. In addition, as the Project would have significant regional NO_X impacts without incorporation of mitigation, the Project would incorporate Mitigation Measure AIR-1, which would reduce construction emissions for all pollutants. With implementation of Mitigation Measure AIR-1, NO_X emissions would be reduced to a less than significant level. As such, the Project meets this AQMP consistency criterion.

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

With regard to land use developments such as the Project, air quality policies focus on the reduction of vehicle trips and vehicle miles traveled. As discussed below, the Project would support a number of air quality-related policies established by the City of Long Beach and SCAG. The Project is located within 0.25 mile of the Metro Blue Line Downtown Long Beach station, which would facilitate the use of mass transit, thereby reducing vehicle trips and miles travelled. The Project is also located within 0.5 mile of Downtown Long Beach, which would also promote walking while reducing vehicle trips to and from the Project Site.

The surrounding Project area includes a mature network of pedestrian facilities, including sidewalks, crosswalks, and pedestrian safety features along Ocean Boulevard, Pine Avenue, and Seaside Way. Furthermore, bike routes, lanes, and paths are available in the Project area. Additionally, the existing Long Beach Bike Share station located at the northwest corner of the Project Site would remain in place as part of the Project. The location of the Project Site and its accessibility to a variety of transportation options would encourage the use of alternative modes of transportation.

In addition, the Project would incorporate features to support and promote environmental sustainability, including energy conservation, water conservation, and waste reduction features. Such features would further reduce air emissions. Furthermore, to minimize particular emissions and control dust during construction, the Project would comply with SCAQMD Rule 403.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of the proposed Project on air quality in the Air Basin. While development of the Project would result in short-term regional impacts, Project development would not have a significant long-term impact on the region's ability to meet state and federal air quality standards. The Project would comply with SCAQMD Rule 403 and would implement all necessary feasible mitigation measures for control of NO_X. In addition, the Project would be consistent with the goals and policies of the AQMP for control of fugitive dust. The Project is also consistent with the AQMP because its construction and operational emissions would be less than significant; Project Design

Feature AIR-1 requires implementation of emission control measures; and the Project is consistent with SCAG's population growth projections. As discussed above, the Project's long-term influence would also be consistent with the goals and policies of the AQMP and is, therefore, considered consistent with SCAQMD's AQMP.

(4) City of Long Beach Policies

The City's General Plan Air Quality Element (1996) includes goals and policies related to air quality that apply to the Project. As specified in Project Design Feature AIR-1, the Project would be required to implement a variety of measures aimed at controlling dust during Project construction, consistent with General Plan Air Quality Element Policy 6.1. Policy 6.1 states that the City shall "further reduce particulate emissions from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses." General Plan Air Quality Element Policy 7.1 states that the City shall "reduce energy consumption through conservation improvements and requirements." Consistent with this policy, the Project would incorporate features to support and promote environmental sustainability which would also serve to reduce air pollutant emissions. As discussed further in Section II, Project Description, of this Draft EIR, "green" principles are incorporated as part of the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013). Additionally, the Project has been designed to achieve LEED Silver® certification and would therefore incorporate a number of energy conservation, water conservation, and waste reduction features. Overall, the Project would meet or support relevant air quality policies set forth in the City's General Plan Air Quality Element.

4. Cumulative Impacts

a. Construction

With respect to the Project's construction-period air quality emissions and cumulative Air Basin-wide conditions, SCAQMD has developed strategies (e.g., SCAQMD Rule 403) to reduce criteria pollutant emissions outlined in the AQMP pursuant to federal CAA mandates. As such, the Project would comply with regulatory requirements, including SCAQMD Rule 403 requirements, as discussed above. In addition, the Project would comply with adopted AQMP emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that potentially significant impacts be mitigated to the extent feasible, all construction projects Air Basin-wide would comply with these same requirements (i.e., SCAQMD Rule 403) and would implement all feasible mitigation measures when potentially significant impacts are identified.

According to SCAQMD, individual construction projects that exceed their recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment. As discussed above, with implementation of Mitigation Measure AIR-1, construction-related daily emissions at the Project Site would not exceed any of SCAQMD's regional or localized significance thresholds. Thus, the Project's contribution to cumulative construction-related regional and localized emissions would not be cumulatively considerable and, therefore, would be less than significant.

Similar to the Project, the greatest potential for TAC emissions with respect to each related project would generally involve DPM emissions associated with heavy equipment operations during demolition and grading/excavation activities. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. As previously discussed, "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Construction activities with respect to each related project would not result in a long-term (i.e., 70-year) substantial source of TAC emissions. In addition, SCAQMD's *CEQA Air Quality Handbook* and supplemental online guidance/information do not require an HRA for short-term construction emissions. It is, therefore, not required or meaningful to evaluate long-term cancer impacts from construction activities which occur over relatively short durations. As such, cumulative toxic emission impacts during construction would be less than significant.

b. Operation

According to SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed SCAQMD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants. Operational emissions from the Project would not exceed any of SCAQMD's regional or localized significance thresholds at Project buildout. Therefore, the emissions of non-attainment pollutants and precursors generated by Project operation would not be cumulatively considerable.

With respect to TAC emissions, neither the Project nor any of the related projects (which include residential, commercial/retail, hotel, office, and restaurant uses), would represent a substantial source of TAC emissions, which are more typically associated with large-scale industrial, manufacturing, and transportation hub facilities. The Project and related projects would be consistent with the recommended screening level siting distances for TAC sources, as set forth in CARB's Land Use Guidelines, and the Project and related projects would not result in a cumulative impact requiring further evaluation. However, the Project and each of the related projects would likely generate minimal TAC emissions related to the use of consumer products and landscape maintenance activities, among other things. Pursuant to AB 1807, which directs CARB to identify substances as TACs and adopt ATCMs to control such substances, the SCAQMD has adopted numerous rules (primarily in Regulation XIV) that specifically address TAC emissions. These SCAQMD rules have resulted in and will continue to result in substantial Air Basin-wide TAC emissions reductions. As such, cumulative TAC emissions during long-term operations would be less than significant. In addition, the Project would not result in any substantial sources of TACs that have been identified in CARB's Land Use Guidelines. Accordingly, the Project would not result in a cumulatively considerable impact, and cumulative impacts would be less than significant.

5. Mitigation Measures

The following mitigation measure is designed to reduce the Project's air quality impacts during construction.

Mitigation Measure AIR-1: *Tier 4 Construction Equipment.* The Project shall utilize off-road diesel-powered construction equipment that meets or exceeds CARB and USEPA Tier 4 off-road emissions standards for excavators and loaders during Project excavation and grading activities. To the extent possible, pole power shall be made available for use with electric tools, equipment, lighting, etc. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment.

6. Level of Significance After Mitigation

a. Construction

As presented in Table IV.A-3 on page IV.A-35, implementation of the Project Design Features and the mitigation measure described above would reduce construction emissions of all pollutants. Specifically, maximum regional NO_X emissions would be reduced by approximately 17 percent. Thus, with mitigation, NO_X emissions would be reduced to a less than significant level. Impacts associated with all other criteria pollutants would remain less than significant.

In terms of localized air quality impacts, Table IV.A-4 on page IV.A-37 shows that maximum construction emissions for off-site sensitive receptors would not exceed any of the SCAQMD-recommended localized screening thresholds, and impacts would be less than significant. No mitigation measures are required.

No significant impacts related to TAC emissions during construction are anticipated to occur as a result of the Project. As such, potential Project-level and cumulative TAC impacts would be less than significant. No mitigation measures are required.

b. Operation

Project-level impacts under the Project with regard to regional and localized air quality would be less than significant. In addition, in accordance with SCAQMD guidance, a project does not result in significant cumulative impacts when it does not exceed project-level thresholds. Therefore, cumulative impacts also would be less than significant. Furthermore, the Project would not result in a new long-term source of TACs. The Project would be consistent with CARB siting guidelines, and the Project is not considered to be a substantial source of diesel particulate matter. Potential air toxic impacts to sensitive receptors from Project TAC emissions would therefore be less than significant. Furthermore, Project development would be consistent with the air quality policies set forth in SCAQMD's AQMP and the City of Long Beach Air Quality Element, resulting in a less than significant impact. No mitigation measures are required.

IV. Environmental Impact Analysis
B. Cultural Resources—Historic Resources

1. Introduction

This section of the Draft EIR analyzes the Project's potential impacts on historic resources. This section is based in part on the memorandum entitled *Project Impact Analysis for 100 E. Ocean Blvd., Long Beach Related to Historic Resources* (Historic Resources Memo) prepared by Page & Turnbull (June 2018), and the Interpretive Plan for the Jergins Trust Tunnel (Interpretive Plan) prepared by Page & Turnbull (September 2018), included as Appendices C.1 and C.2 of this Draft EIR, respectively.

2. Environmental Setting

a. Regulatory Framework

Historic resources fall within the jurisdiction of several levels of government. The framework for the identification and, in certain instances, protection of historic resources is established at the federal level, while the identification, documentation, and protection of such resources are often undertaken by state and local governments. As described below, the principal federal, state, and local laws governing and influencing the preservation of historic resources of national, state, regional, and local significance include the National Historic Preservation Act (NHPA) of 1966, as amended; the California Environmental Quality Act (CEQA); the California Register of Historical Resources (California Register); and the City of Long Beach Municipal Code (LBMC; Section 2.63.050), all of which are summarized below.

(1) National Register of Historic Places

Authorized under the NHPA, as amended, the National Register of Historic Places (National Register) is "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[1] The National Register recognizes properties that are significant at the national, state, and local levels.

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

(a) Associated with events that have made a significant contribution to the broad patterns of our history; or

(b) Associated with the lives of persons significant in our past; or

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

(d) Yield, or may be likely to yield, information important in prehistory or history.[2]

In addition to meeting any or all of the criteria listed above, a property nominated for listing on the National Register must have integrity. As defined in *National Register Bulletin 15*, integrity is "the ability of a property to convey its significance."[3] The National Park Service recognizes seven aspects or qualities of integrity: feeling, association, workmanship, location, design, setting, and materials. The following is excerpted from *National Register Bulletin 15,* which provides guidance on the interpretation and application of these factors:

- *Feeling* is a property's expression of the aesthetic or historic sense of a particular period of time.
- *Association* is the direct link between an important historic event or person and a historic property.

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[1] *36 CFR 60, Section 60.2.*

[2] *36 CFR 60, Section 60.3.*

[3] *National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation, Washington DC: U.S. Department of the Interior, National Park Service, 1997.*

- *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

- *Location* is the place where the historic property was constructed or the place where the historic event took place.

- *Design* is the combination of elements that create the form, plan, space, structure, and style of a property.

- *Setting* is the physical environment of a historic property.

- *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.[4]

In assessing a property's integrity, the National Park Service also recognizes that properties change over time. Therefore, as described in *National Register Bulletin 15*, "it is not necessary for a property to retain all of its historic physical features or characteristics. The property must retain, however, the essential physical features that enable it to convey its historic identity."

To be eligible for listing in the National Register, a property must also be significant within a historic context. According to *National Register Bulletin 15*, historic contexts are "those patterns, themes, or trends in history by which a specific…property or site is understood and its meaning…is made clear." A property must represent an important aspect of the area's history or prehistory and possess the requisite integrity to qualify for the National Register.

Additionally, the National Park Service defines the period of significance as "the length of time when a property was associated with important events, activities or persons, or attained the characteristics which qualify it for… listing" in national, state, or local registers. A period of significance can be "as brief as a single year… [or] span many years." It is based on "specific events directly related to the significance of the property," for example, the date of construction, years of ownership, or length of operation as a particular entity.[5]

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4 *National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation, Washington DC: U.S. Department of the Interior, National Park Service, 1997.*

5 *National Register Bulletin 16A, How to Complete the National Register Registration Form, Washington, DC: U.S. Department of the Interior, National Park Service, 1997.*

(2) California Register of Historic Resources

The California Register was enacted in 1992, and its regulations became effective on January 1, 1998. The California Register is an authoritative guide used by state and local agencies, private groups, and citizens to identify the State's historic resources and indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.[6] The criteria for eligibility for listing in the California Register are based on National Register criteria. To be eligible for listing in the California Register, a property generally must be at least 50 years of age and must possess significance at the local, state, or national level, under one or more of the following criteria:

(1) Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.

(2) Associated with the lives of persons important to local, California or national history.

(3) Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.

(4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Historic resources eligible for listing in the California Register may include buildings, sites, structures, objects, and historic districts. Resources less than 50 years of age may be eligible if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource. While the enabling legislation for the California Register is less rigorous with regard to the issue of integrity, there is an expectation that properties reflect their appearance during their period of significance.[7]

A historic resource eligible for listing in the California Register must meet one or more of the significance criteria described above and retain enough of its historic character or appearance to be recognizable as a historic resource and to convey the reasons for its significance. As described above, integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for

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[6] *PRC Section 5023.1(a).*

[7] *CCR Section 4852.*

eligibility. California Register regulations contained in California Code of Regulations (CCR), Title 14, Chapter 11.5 include Section 4852(c), which states "it is possible that historical resources may not retain sufficient integrity to meet the criteria for listing in the National Register, but they may still be eligible for listing in the California Register."

The California Register also includes properties that: (1) have been formally determined eligible for listing in, or are listed in, the National Register; (2) are registered State Historical Landmark Number 770 and all consecutively numbered landmarks above Number 770; or (3) are points of historical interest which have been reviewed by the California Office of Historic Preservation (OHP) and recommended for listing by the State Historical Resources Commission. Resources that may be nominated for listing in the California Register include: individual historic resources; historic resources contributing to the significance of a historic district; historic resources identified as significant in historic resources surveys; historic resources and historic districts designated or listed as city or county landmarks or historic properties or districts; and local landmarks.

(3) California Environmental Quality Act

CEQA requires a lead agency to analyze whether historic resources may be adversely impacted by a project. Under Public Resources Code (PRC) Section 21084.1, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment." This statutory standard involves a two-part inquiry. The first involves a determination of whether the project involves a historic resource. If so, the lead agency must determine whether the project may involve a "substantial adverse change in the significance" of the resource. CEQA Guidelines Section 15064.5(b) defines a "substantial adverse change" as the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." In accordance with CEQA Guidelines Section 15064.5(b), the significance of a historic resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to PRC Section 5020.1(k) or its identification in an historical resources survey meeting the requirements of PRC Section 5024.1(g), unless the public agency reviewing the effects of the project establishes by a

preponderance of evidence that the resource is not historically or culturally significant; or

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

For purposes of CEQA compliance, CEQA Guidelines Section 15064.5 defines “historical resources” as including the following:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.[8]

- A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements in PRC Section 5024.1(g), shall be presumed to be historically or culturally significant. Public agencies must treat such resources as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing on the California Register of Historical Resources.[9]

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register, not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

In addition, CEQA Guidelines Section 15064.5(b)(3) states that generally a project that follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties*

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[8] *PRC Section 5024.1; Title 14 CCR, Section 4850 et seq.*

[9] *PRC Section 5024.1; Title 14 CCR, Section 4852.*

with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Secretary of the Interior's Standards) shall be considered to mitigate impacts to the historical resource to a less than significant level.

(4) City of Long Beach Municipal Code

The Cultural Heritage Commission Ordinance was enacted in 1973 and created the City's Cultural Heritage Commission and criteria for the designation of City Historic Landmarks. Based on the ordinance, historic landmarks are defined as any sites, buildings, or structures of particular historic or cultural significance to the City of Long Beach in which the broad cultural, economic, political, or social history of the nation, state, or city is reflected or exemplified. Historic landmarks are regulated by the City's Cultural Heritage Commission, which reviews permits to alter, relocate, or demolish such landmarks.

LBMC Section 2.63.050 establishes criteria for designating local historic landmarks and landmark districts. A cultural resource may be recommended for designation as a landmark if it retains integrity and manifests one or more of the following criteria:

(A) It is associated with events that have made a significant contribution to the broad patterns of the City's history; or

(B) It is associated with the lives of persons significant in the City's past; or

(C) It embodies the distinctive characteristics of a type, period or method of construction, or it represents the work of a master or it possesses high artistic values; or

(D) It has yielded, or may be likely to yield, information important in prehistory or history.[10]

Similarly, a group of cultural resources may qualify for designation as a landmark district if it retains integrity as a whole and meets the following criteria:

(E) The grouping represents a significant and distinguishable entity that is significant within a historic context.

[10] *LBMC Section 2.63.050.*

(F) A minimum of sixty percent (60%) of the properties within the boundaries of the proposed landmark district qualify as a contributing property.[11]

(5) City of Long Beach Historic Preservation Element

The Historic Preservation Element of the Long Beach 2030 General Plan was adopted by the City Council in June 2010. The Historic Preservation Element outlines a vision for future historic preservation efforts and the actions needed to achieve that vision. Primary goals of the Historic Preservation Element are to better integrate historic preservation into City procedures and interdepartmental decisions and to create a meaningful partnership with the community in order to implement the historic preservation program.

b. Existing Conditions

The Project Site was the former location of the Jergins Trust Building, a Long Beach Historic Landmark. Construction on the building began in 1916 and was complete by 1928.[12] Reaching 10 stories in height, the Jergins Trust Building contained offices, stores, restaurants, a theater, and an arcade containing small shops on the lower three floors. Other tenants included a post office, barber shop, news and magazine businesses, and a school. An underground arcade and tunnel, referred to as the Jergins Trust Tunnel, extended from below the building to the northern side of Ocean Boulevard.[13] The northern entrance to the Jergins Trust Tunnel was closed in 1967, and the Jergins Trust Building itself was demolished in 1988. However, the Jergins Trust Tunnel remains in place and is considered a historic resource. In addition, two other historic resources are located in the surrounding vicinity: the Ocean Center Building and the Breakers. These resources are described further below.

(1) Jergins Trust Tunnel

Constructed as a “subway to the beach” in 1927, the Jergins Trust Tunnel is a tile-lined underground pedestrian walkway stretching below Ocean Boulevard and Victory Park, just east of and parallel to Pine Avenue. It was one of a series of passageways built by the City in the early 20th century under busy thoroughfares used by streetcars and

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[11] *LBMC Section 2.63.050.*

[12] *SCS Engineers, Phase I Environmental Site Assessment, June 2018. Refer to Appendix IS-4 of the Project’s Initial Study included as Appendix A of this Draft EIR.*

[13] *SCS Engineers, Phase I Environmental Site Assessment, June 2018. Refer to Appendix IS-4 of the Project’s Initial Study included as Appendix A of this Draft EIR.*

automobiles. The tunnel originally led through the Jergins Trust Building to the seashore and Pike Pleasure Pier. As the popularity of the seaside amusement park waned in the post-war years, the tunnel's north end was closed in 1967 to widen Ocean Boulevard. Later, the shoreline was filled to construct the Long Beach Convention Center, which removed the subterranean connection to the beach. The Jergins Trust Tunnel was found eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, and as a City of Long Beach Historic Landmark in 2009.[14] Under existing conditions, it is not visible from the street, nor is it open to the public.

(2) Ocean Center Building

The Ocean Center Building, located west of the Project Site across Pine Avenue, was constructed in 1929 as an office building. It was designed by Meyer & Holler, a team best known for designing the Grauman's Chinese Theatre and the Egyptian Theatre in Hollywood. The Italian Mediterranean style building features sea shells and the face of Neptune on a shield above the main entrance. The rectangular building stretches the full block from Ocean Boulevard to Seaside Way and is set back from Ocean Boulevard behind a minimally landscaped portion of Victory Park, which is bordered by a decorative concrete wall along Pine Avenue. The building varies from 6 to 13 stories in height and is a City Historic Landmark. It presently appears abandoned with several broken and open windows.

(3) The Breakers

Designed by architects Walker and Eisen and constructed in 1925 by builder W. Jay Burgin, the 13-story Breakers building located east of the Project Site at 200-220 East Ocean Boulevard originally opened as a resort hotel. It is Spanish Renaissance in style with sea-themed decorations in the entryway and inside the lobby. The rectangular building has a long façade along Ocean Boulevard, stretching from Locust Avenue to Collins Way, and similar to the Ocean Center Building, is set back from Ocean Boulevard behind a portion of Victory Park. The building has a two-story wing at its east end and an elaborate entryway in the center. The Breakers is a City Historic Landmark. Current plans call for renovating the mostly vacant building for reuse as a hotel.[15]

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[14] *Refer to the Historic Resources Memo included as Appendix C.1 of this Draft EIR, page 5.*

[15] *Barragan, Blanca, "Long Beach's historic Breakers building will reopen as independent hotel, Curbed Los Angeles, January 12, 2018, https://la.curbed.com/2018/1/12/16880818/long-beach-hotel-breakers-renovation-pacific6, accessed June 19, 2019.*

3. Environmental Impacts

a. Methodology

The Historic Resources Memo provided in Appendix C.1 of this Draft EIR was prepared using primary and secondary sources related to the City's development history. Under CEQA, the evaluation of impacts to historic resources consists of a two-part inquiry: (1) a determination of whether the project site contains or is adjacent to a historically significant resource or resources; and if so (2) a determination of whether the proposed project will result in a "substantial adverse change" in the significance of the resource(s).

b. Thresholds of Significance

Appendix G of the CEQA Guidelines provides the following sample question that addresses impacts with regard to historic resources:

Would the project:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

For purposes of this analysis, the City adopts CEQA Guidelines Appendix G as the threshold of significance.

c. Project Design Features

No specific Project design features are proposed with regard to historic resources.

d. Analysis of Project Impacts

(1) Direct Impacts

As part of Project development, the Jergins Trust Tunnel would be reopened and connected to the lower level of the proposed building. A study session to review the Interpretative Plan was conducted on September 10, 2018, with the Cultural Heritage Commission. The Interpretative Plan is included as Appendix C.2 of this Draft EIR. As discussed therein, improvements include a new entry lobby would be constructed adjacent to the tunnel which would feature an interpretive exhibit with signage, salvaged artifacts from the Jergins Trust Building, wood artifact installation to re-create one wall from available wood artifacts, and an audio/video display. The tunnel would be cleaned, stabilized, and improved to allow public tours to access the tunnel; such improvements may include cleaning and minor repair of the tiled surfaces, improving lighting and ventilation, and a new wall or enclosure at the tunnel's south end connecting to the proposed lobby. The Project therefore has the potential to materially alter historic aspects of the tunnel. In addition, ground movement and vibration from construction of the Project may have the potential to damage the tunnel. These impacts could significantly affect the tunnel. However, implementation of Mitigation Measures HIS-1 and HIS-2 detailed below would reduce these impacts to a less than significant level. Specifically, Mitigation Measure HIS-1 would require all work to be performed in accordance with the Secretary of the Interior's Standards, which per CEQA Guidelines Section 15064.5 is generally considered to mitigate potential impacts to a less than significant level.

(2) Indirect Impacts

Based on the CEQA Guidelines, a proposed project can result in potentially significant impacts if it changes the immediate surroundings of a historic resource such that the significance of the resource is "materially impaired" as defined by CEQA Guidelines Section 15064.5(b) As discussed above, a historic resource's significance is materially impaired when it can no longer convey the significance that justifies its eligibility as a historic resource; in other words, when it has lost its integrity.[16] As previously discussed, the National Park Service identifies seven aspects or qualities that in various combinations define integrity: location, design, setting, materials, workmanship, feeling, and association.

Implementation of the Project would not impact the integrity with regard to location, design, materials, workmanship, feeling, or association of either the Ocean Center Building or the Breakers which are individual historic resources and not part of a historic district. Given that the Project would replace a surface parking lot with a new, 30-story building, it would alter the setting adjacent to these two historic properties. However, that change is not extensive enough for either the Ocean Center Building or the Breakers to lose their overall integrity or historic status, particularly since the original setting around both buildings has been substantially altered since their construction in the 1920s. Currently, Ocean Boulevard is a major urban thoroughfare in Long Beach that has been developed with a mix of low- and high-rise buildings dating from the 1920s through the 2010s. More specifically, Ocean Boulevard includes a mix of 3- to 20-story commercial, residential, and civic buildings representing a variety of styles and periods from the 1920s Mediterranean Revival styles of the Ocean Center Building and the Breakers, to the 1960s and 1970s Late Modern designs of the Long Beach Performing Arts Center, as well as the 1980s mirror

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[16] *Per CEQA Guidelines Section 15064.5(b), integrity is the ability of a resource to convey its historic significance through its physical features and is defined by the National Park Service as "the authenticity of property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic period."*

glass and panel-clad buildings like the Salvation Army Building directly east of the Project Site. Additionally, new development includes the Oceanaire mid-rise residential development now under construction adjacent to the Ocean Center Building to the west. Furthermore, to the south of both historic buildings, the original shoreline was filled to allow for construction of the Long Beach Convention Center in the 1970s and the marina in the early 1980s, so the historic relationship of the Ocean Center Building and the Breakers to the beach no longer exists. Nevertheless, these buildings remain historic and are able to convey their significance despite the changes in the surrounding setting.

While the scale of the Project would be larger than many of the surrounding buildings, the proposed hotel would be similar in height to the Wells Fargo Bank building (completed in 1990) located one block to the northwest. Nonetheless, the Ocean Center Building and the Breakers are sufficiently large and separated from the Project Site that they would remain distinguishable and distinct along Ocean Boulevard.

The Project would also respect the continuous line of Victory Park and would be set back from the street, in line with both the Ocean Center Building and the Breakers. The portion of Victory Park within the Project Site would retain the original Ocean Boulevard curb cuts and driveway area of the Jergins Trust Building, and be improved with new landscaping and a pedestrian walkway, consistent with the physical layout of Victory Park on nearby properties. At the southern end of the Project, the building podium would mirror the rear section of the Ocean Center Building, while the setback along the building's northeast corner and the upper floor balconies would provide architectural articulation. The glass curtain wall of the proposed building would reflect its period of construction and the mix of materials that presently line Ocean Boulevard.

Overall, the Project would continue the trend of changes to the area around the Ocean Center Building and the Breakers, but not to the extent that the integrity of these historic resources would be materially impacted. However, the Project Site itself has not been part of the historic setting of the nearby buildings since the Jergins Trust Building was demolished, and by reopening the Jergins Trust Tunnel, the Project would have a positive impact on the historic setting of the buildings. Indirect impacts on historic resources would be less than significant, and no mitigation measures would be required.

4. Cumulative Impacts

As indicated in Section III, Environmental Setting, of this Draft EIR, there are 55 related projects in the general vicinity of the Project Site. While the majority of the related projects are located a fair distance from the Project Site and are not considered historic resources, Related Project No. 7, the Ocean Center redevelopment project, is located across Pine Avenue from the Project Site to the west; and Related Project No. 47, The Breakers redevelopment, involves the adaptive reuse of historic buildings. Collectively, the related projects near the Project Site involve primarily residential, retail, restaurant, office, hotel, and recreational uses, consistent with existing uses in the Project area.

Although impacts to historic resources tend to be site-specific, a cumulative impact analysis of historic resources determines whether the impacts of a project and the related projects in the surrounding area, when taken as a whole, would substantially diminish the number of historic resources within the same or similar context or property type. Specifically, cumulative impacts would occur if the Project and related projects affect local resources with the same level or type of designation or evaluation, affect other structures located within the same historic district, or involve resources that are significant within the same context. As previously evaluated, potential Project-related impacts associated with the historic resources adjacent to the Project Site would be less than significant, and potential impacts to the Jergins Trust Tunnel would be less than significant with mitigation incorporated. The Project would not result in a substantial adverse change to the immediate surroundings of the nearby historic resources to such a degree that their eligibility as resources would be materially impaired. They would continue to be eligible for listing as historic resources defined by CEQA. Furthermore, the Project would restore access to the Jergins Trust Tunnel, a City of Long Beach Historic Landmark. To the extent that any related projects have the potential to affect the integrity of historic resource(s), mitigation would be required. In particular, any improvements to the Breakers building would be subject to the Secretary of the Interior's Standards, which as discussed above, is generally considered as mitigated to a less than significant level. Therefore, the Project would not result in any incremental increase in impacts to historic resources, and the Project's impacts to historic resources would not be cumulatively considerable. As such, cumulative impacts to historic resources would be less than significant.

5. Mitigation Measures

Mitigation Measure HIS-1: All work in and around the Jergins Trust Tunnel shall comply with the Secretary of the Interior's Standards. This includes, among others, using the gentlest means possible for cleaning, retaining distinctive materials and features, and designing alterations and news construction that is compatible with its historic character. Other specific measures to ensure work complies with the Secretary of the Interior's Standards include the following:

- A qualified professional historic architect or historic preservation consultant that meets the Secretary of the Interior's Professional Qualification Standards shall be retained as part of the Project team. The historic architect or preservation professional shall participate in the design of the Project as it relates to Jergins Trust

Tunnel through design development and construction documents to ensure compliance with the Secretary of the Interior’s Standards.

- The historic architect or preservation professional shall prepare a report at the conclusion of the design development phase of the Project analyzing compliance with the Secretary of the Interior’s Standards. The report should identify and catalog all character defining features of the tunnel and provide recommendations for protection and treatment. The report shall be submitted to the City of Long Beach’s preservation staff for their review and approval prior to the issuance of building permits.
- The historic architect or preservation professional shall participate in period monitoring of the Secretary of the Interior’s Standards compliance during construction to completion. The monitoring shall include field notes, photographs, and other documentation of the Project as it relates to Jergins Trust Tunnel. The Secretary of the Interior’s Standards monitoring may be performed in conjunction with the construction monitoring required pursuant to Mitigation Measure CUL-2.

Mitigation Measure HIS-2: The Applicant shall implement a Construction Monitoring Plan prepared by a qualified structural engineer, historic architect, and/or other professional to ensure the protection of Jergins Trust Tunnel during construction from damage due to underground excavation, pile driving, and general construction processes as well as settlement or earth movement from the removal of adjacent soil and features. Prior to issuance of an earthwork or demolition permit, the Construction Monitoring Plan and protection measures shall be reviewed by a qualified professional historic architect or historic preservation consultant that meets the Secretary of the Interior’s Professional Qualifications Standards to ensure the measures would adequately protect the Jergins Trust Tunnel. The historic architect or historic preservation professional shall participate in monitoring of the tunnel during construction to completion, per the procedures set forth in the Construction Monitoring Plan. The Construction Monitoring Plan shall include the following procedures to:

- Document the baseline conditions of the Jergins Trust Tunnel prior to any ground disturbing activity in a Preconstruction Survey Report;
- Reduce potential impacts from construction activities on the physical features of the tunnel, such as shoring, maximum vibration levels, or other methods;
- Monitor vibration and settlement throughout construction using survey markers or other monitoring devices;

- Determine when construction impacts are occurring, and actions needed to halt, mitigate, repair, and/or avoid these impacts;
- Monitor the Jergins Trust Tunnel with periodic site visits during construction (such as monthly or at specific milestones that have the potential to cause damage), producing field reports with photo and illustrative documentation for each monitoring session;
- Conduct a post-construction survey prior to the issuance of the Certificate of Occupancy, taking into account any conservation or stabilization work of the tunnel to ensure that significant adverse impacts have not occurred to the tunnel from construction-related activities.

6. Level of Significance After Mitigation

Mitigation Measures HIS-1 and HIS-2 would reduce potential impacts to historic resources to a less than significant level. Cumulative impacts on historic resources also would be less than significant.

IV. Environmental Impact Analysis

C. Greenhouse Gas Emissions

1. Introduction

This section of the Draft EIR provides a discussion of global climate change, existing regulations pertaining to climate change, an inventory of the greenhouse gas (GHG) emissions that would result from the Project, and an analysis of the potential impact of those GHGs. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix B of this Draft EIR.

2. Environmental Setting

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and storms. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

Earth's natural warming process is known as the "greenhouse effect." It is called the greenhouse effect because Earth and the atmosphere surrounding it are similar to a greenhouse with glass panes in that solar radiation (sunlight) can pass into Earth's atmosphere but radiative heat is prevented from escaping, thus warming Earth's atmosphere. Some levels of GHGs keep the average surface temperature of Earth close to a hospitable 60 degrees Fahrenheit. However, it is believed that excessive concentrations of anthropogenic GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences.[1]

Scientists studying the rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity, and the

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[1] *USEPA, Climate Change: Basic Information, https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html, accessed June 19, 2019.*

decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.[2]

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO_2) concentrations in 2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.[3] Global increases in CO_2 concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. With regard to emissions of non-CO_2 GHG, these have also increased significantly since 1990.[4] In particular, studies have concluded it is very likely that the observed increase in methane (CH_4) concentration is predominantly due to agriculture and fossil fuel use.[5]

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.[6]

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[2] *Center for Climate and Energy Solutions, Climate Change 101: Understanding and Responding to Global Climate Change.*

[3] *C. Le Quéré, et al., Global Carbon Budget 2014, (Earth System Science Data, 2015, doi:10.5194/essd–7–47–2015).*

[4] *USEPA, Global Greenhouse Gas Emissions Data, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed June 19, 2019.*

[5] *USEPA, Atmospheric Concentrations of Greenhouse Gas, updated June 2015.*

[6] *United Nations Framework Convention on Climate Change, Press Release—Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change, August 31, 2007.*

With regard to the adverse effects of global warming, as reported by the Southern California Association of Governments (SCAG), "[g]lobal warming poses a serious threat to the economic well-being, public health and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, the energy intensity of the national and state economies has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO_2 emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO_2 emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the State's population and economic activities, is also a major contributor to the global warming problem."[7]

a. GHG Background

GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[8] Carbon dioxide is the most abundant GHG. Other GHGs are less abundant but have higher global warming potential than CO_2. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. A general description of the GHGs is provided in Table IV.C-1 on page IV.C-4.

Global Warming Potentials (GWPs) are one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system. GWP is based on a number of factors, including the radiative efficiency (i.e., heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (i.e., the amount removed from the atmosphere over a given number of years) relative to that of CO_2. The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. The atmospheric lifetime of a gas is defined as the time required to turn over the global atmospheric burden.[9] A summary of the atmospheric lifetime and GWP of selected gases is presented in Table IV.C-2 on page IV.C-5. As indicated below, GWPs range from 1 to 22,800.

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[7] *SCAG, The State of the Region—Measuring Regional Progress, December 2006, p. 121.*

[8] *As defined by AB 32 and SB 104.*

[9] *Intergovernmental Panel on Climate Change, IPCC Third Assessment Report: Climate Change 2001 (TAR), Chapter 4: Atmospheric Chemistry and Greenhouse Gases, 2001, p. 247.*

Table IV.C-1
Description of Identified Greenhouse Gases[a]

Greenhouse Gas	General Description
Carbon Dioxide (CO_2)	CO_2 is an odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO_2 are burning coal, oil, natural gas, and wood.
Methane (CH_4)	CH_4 is a flammable gas and the main component of natural gas. When one molecule of CH_4 is burned in the presence of oxygen, one molecule of CO_2 and two molecules of water are released. A natural source of CH_4 is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH_4, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.
Nitrous Oxide (N_2O)	N_2O is a colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF_3)	NF_3 is an inorganic, non-toxic, odorless, non-flammable gas. NF_3 is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

[a] *The GHGs identified in this table are those identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.*

Source: Association of Environmental Professionals, Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007; USEPA, Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride; January 2009.

Table IV.C-2
Atmospheric Lifetimes and Global Warming Potentials

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12 (+/-3)	25
Nitrous Oxide (N_2O)	114	298
HFC-23: Fluoroform (CHF_3)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH_2FCF_3)	14	1,430
HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$)	1.4	124
PFC-14: Tetrafluoromethane (CF_4)	50,000	7,390
PFC-116: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800
Nitrogen Trifluoride (NF_3)	740	17,200

Source: IPCC, Climate Change 2007: Working Group I: The Physical Science Basis, Direct Global Warming Potentials.

b. Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and be responsible for preparing reports to the Governor on the status of the CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California.[10] These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion;
- The Sierra snowpack would decline between 70 and 90 percent, threatening California's water supply;
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth.

[10] *State of California, Department of Justice, Office of the Attorney General, Climate Change Impacts in California, https://oag.ca.gov/environment/impact, accessed June 19, 2019.*

- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes resulting in public health impacts;
- Habitat destruction and loss of ecosystems due to climate change affecting plant and wildlife habitats.
- Global warming can cause drought, warmer temperatures and salt water contamination resulting in impacts to California's agricultural industry.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO_2; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.[11]

c. Regulatory Framework

In response to growing scientific and political concern regarding global climate change, federal and state entities have adopted a series of laws to reduce emissions of GHGs to the atmosphere.

(1) Federal

(a) Federal Clean Air Act

The United States Supreme Court (Supreme Court) ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO_2 and other GHGs are pollutants under the federal Clean Air Act (CAA), which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. The Supreme Court did not mandate the USEPA to enact regulations to reduce GHG emissions. Instead, the Court found the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

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[11] *Paul R. Epstein, et al., Urban Indicators of Climate Change, Report from the Center for Health and the Global Environment, (Harvard Medical School and the Boston Public Health Commission, August 2003), unpaginated.*

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.[12] While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the USEPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

On July 20, 2011, the USEPA published its final rule deferring GHG permitting requirements for CO_2 emission from biomass-fired and other biogenic sources until July 21, 2014. Environmental groups have challenged the deferral. In September 2011, USEPA released an "Accounting Framework for Biogenic CO_2 Emissions from Stationary Sources," which analyzes accounting methodologies and suggests an implementation for biogenic CO_2 emitted from stationary sources.

On April 4, 2012, USEPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired electric generating units larger than 25 megawatts (MW) are required to limit emissions to 1,000 pounds of CO_2 per MW-hour (CO_2/MWh) on an average annual basis, subject to certain exceptions.

On April 17, 2012, the USEPA issued emission rules for oil production and natural gas production and processing operations, which are required by the CAA under Code of Federal Regulations Title 40, Parts 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that currently are not regulated at the federal level.[13]

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[12] *USEPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule.*

[13] *USEPA, 2012 Final Rules for Oil and Natural Gas Industry, April 17, 2012, www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/2012-final-rules-oil-and-natural-gas-industry, accessed June 19, 2019.*

(b) Corporate Average Fuel Economy (CAFE) Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the George W. Bush Administration issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if the standards were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On April 2, 2018, the USEPA signed the Mid-term Evaluation Final Determination which finds that the model year 2022–2025 greenhouse gas standards are not appropriate and should be revised.[14] This serves to initiate a notice to further consider appropriate standards for model year 2022–2025 light duty vehicles. On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and revoke California's waiver under the Clean Air Act to establish more stringent standards.[15]

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the

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[14] *Federal Register, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles, www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty, accessed June 19, 2019.*

[15] *Proposed Rule: The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, www.regulations.gov/document?D=EPA-HQ-OAR-2018-0283-0756, accessed June 19, 2019.*

USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.[16]

Building on the success of the first phase of standards, in August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and save vehicle owners fuel costs of about $170 billion.[17] As discussed above, the USEPA is currently in the process of reevaluating the greenhouse gas standards for model year 2022–2025 light-duty vehicles.

(c) Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks; and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

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[16] *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.*

[17] *USEPA, "EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond," August 2016.*

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[18]

(2) State

(a) Executive Order S-3-05, Executive Order B-30-15, and Executive Order B-55-18

Executive Order S-3-05, issued by Governor Arnold Schwarzenegger in June 2005, established GHG emissions targets for the State, as well as a process to ensure the targets are met. The order directed the Secretary for the California Environmental Protection Agency (CalEPA) to report every two years on the State's progress toward meeting the Governor's GHG emission reduction targets. The statewide GHG targets established by Executive Order S-3-05 are as follows:

- By 2010, reduce to 2000 emission levels;[19]
- By 2020, reduce to 1990 emission levels;
- By 2050, reduce to 80 percent below 1990 levels.

Executive Order B-30-15, issued by Governor Edmund G. "Jerry" Brown (Governor Brown) in April 2015, established an additional statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030 and by 80 percent below 1990 levels by 2050 (consistent with Executive Order S-3-05) aligns with scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius.[20]

The State Legislature adopted equivalent 2020 and 2030 statewide targets in the California Global Warming Solutions Act of 2006 (also known as Assembly Bill [AB] 32) and Senate Bill (SB) 32, respectively, both of which are discussed below. However, the Legislature has not yet adopted a target for the 2050 horizon year. As a result of Executive Order S-3-05, the California Climate Action Team (CAT), led by the Secretary of CalEPA,

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[18] *A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.*

[19] *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?, July 3, 2013.*

[20] *CARB, Frequently Asked Questions about Executive Order B-30-15, 2030 Carbon Target and Adaptation FAQs, April 29, 2015.*

was formed. The CAT is made up of representatives from a number of state agencies and was formed to implement global warming emission reduction programs and to report on the progress made toward meeting statewide targets established under Executive Order S-3-05. The CAT reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in Executive Order S-3-05.[21]

The CAT considers “smart land use” an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. “Intelligent transportation systems” refers to the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.[22]

Executive Order B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, the California Air Resources Board (CARB) would work with relevant state agencies to develop a framework for implementation and accounting that tracks progress towards this goal as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

(b) Assembly Bill 32 and Senate Bill 32

AB 32, the California Global Warming Solutions Act of 2006, commits the State to achieving the following:

- By 2010, reduce to 2000 GHG emission levels;[23] and
- By 2020, reduce to 1990 levels.

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[21] *CalEPA, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.*

[22] *CalEPA, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 58.*

[23] *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., “Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?,” July 3, 2013.*

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.[24]

SB 32, signed September 8, 2016, updates AB 32 to include an emissions reduction goal for the year 2030, consistent with Executive Order B-30-15. Specifically, SB 32 requires CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

(c) Climate Change Scoping Plan

In 2008, CARB approved a *Climate Change Scoping Plan* (referred to herein as the 2008 Climate Change Scoping Plan), as required by AB 32.[25] Subsequently, CARB approved updates to the 2008 Climate Change Scoping Plan in 2014 (First Update) and 2017 (2017 Update), with the 2017 Update considering SB 32 in addition to AB 32. These documents are summarized below.

The 2008 Climate Change Scoping Plan proposed a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health."[26] The 2008 Climate Change Scoping Plan identified a range of GHG reduction actions which included 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.

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[24] *CARB's list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.*

[25] *Climate Change Proposed Scoping Plan was approved by CARB on December 11, 2008.*

[26] *CARB, Climate Change Scoping Plan: A Framework for Change, December 2008.*

The 2008 Climate Change Scoping Plan called for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard (LCFS), and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy sources through implementation of the Renewables Portfolio Standard (RPS).[27] Additionally, the 2008 Climate Change Scoping Plan emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicated that substantial savings of electricity and natural gas would be accomplished through "improving energy efficiency by 25 percent."

The 2008 Climate Change Scoping Plan identified a number of specific issues relevant to the Project, including:

- The potential of using the green building framework as a mechanism, which could enable GHG emissions reductions in other sectors (i.e., electricity, natural gas), noting that:

  > *A Green Building strategy will produce greenhouse gas savings through buildings that exceed minimum energy efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Combined, these measures can also contribute to healthy indoor air quality, protect human health, and minimize impacts to the environment.*

- The importance of supporting the Department of Water Resources' work to implement the Governor's objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The *2008 Climate Change Scoping Plan* noted that water use requires significant amounts of energy, including approximately one-fifth of statewide electricity.

- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

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[27] *For a discussion of Renewables Portfolio Standard, refer to subsection 2(h)i, California Renewables Portfolio Standard.*

Forecasting the amount of emissions that would occur in 2020 if no actions were taken was necessary to assess the scope of the reductions California would need to make to return to the 1990 emissions level by 2020 as required by AB 32. CARB originally defined the "business-as-usual" or BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the 2008 Climate Change Scoping Plan. For example, in further explaining CARB's BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. In the 2008 Climate Change Scoping Plan, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations).[28]

Subsequent to adoption of the 2008 Climate Change Scoping Plan, a lawsuit was filed challenging CARB's approval of the Climate Change Scoping Plan Functional Equivalent Document (FED to the Climate Change Scoping Plan). On May 20, 2011, the Court found that the environmental analysis of the alternatives in the FED to the Climate Change Scoping Plan was not sufficient under CEQA (Case No. CPF-09-509562). CARB staff prepared a revised and expanded environmental analysis, and the Supplemental FED to the Climate Change Scoping Plan was approved on August 24, 2011 (Supplemental FED). The Supplemental FED indicated that there is a potential for adverse environmental impacts associated with implementation of the various GHG emission reduction measures recommended in the 2008 Climate Change Scoping Plan.

As part of the Supplemental FED, CARB updated the projected 2020 BAU emissions inventory based on then-current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the State's average emissions from 2006 through 2008. Specific emission reduction measures included were the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the LCFS.[29] In addition, CARB also factored into the 2020 BAU inventory emissions reductions associated with a 33-percent RPS for electricity generation. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from BAU

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[28] *CARB, Climate Change Scoping Plan: A Framework for Change, December 2008, p. 12.*

[29] *Pavley I are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 to 2016. Pavley I could potentially result in 27.7 million metric tons CO_2e reduction in 2020. Pavley II will cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tons CO_2e.*

conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures discussed above, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.[30,31]

In 2014, CARB adopted the First Update.[32] The stated purpose of the First Update was to "highlight… California's success to date in reducing its GHG emissions and lay… the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050."[33] The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.[34]

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050."[35] Those six areas are: (1) energy; (2) transportation (vehicles/ equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identifies key recommended actions for each sector that would facilitate achievement of the 2050 reduction target.

Based on CARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050."[36] Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road

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30 CARB, Supplement to the AB 32 Scoping Plan FED, Table 1.2-2.

31 The emissions and reductions estimates found in the Supplemental FED to the Climate Change Scoping Plan fully replace the estimates published in the 2008 Climate Change Scoping Plan. See CARB, Resolution 11-27 (Aug. 24, 2011) (setting aside approval of 2008 Climate Change Scoping Plan and associated emissions forecasts, and approving the Supplemental FED). The estimates in the 2008 document are 596 million metric tons CO_2e under 2020 BAU and a required reduction of 169 million metric tons CO_2e (28.4 percent).

32 Health & Safety Code Section 38561(h) requires CARB to update the Scoping Plan every five years.

33 CARB, 2014 Update, May 2014, p. 4.

34 CARB, 2014 Update, May 2014, p. 34.

35 CARB, 2014 Update, May 2014, p. 6.

36 CARB, 2014 Update, May 2014, p. 32.

vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

The First Update discusses new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings as an element of meeting mid-term and long-term GHG reduction goals. The First Update also expresses CARB's commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

In December 2017, CARB adopted the 2017 Update. The 2017 Update builds upon the framework established by the 2008 Climate Change Scoping Plan and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Update includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade program, which constrains and reduces emissions at covered sources.[37]

(d) Assembly Bill 197

AB 197, signed September 8, 2016, is a bill linked to SB 32, which prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its Internet Web site, the emissions of greenhouse gases, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two Members of the Legislature to the CARB board as ex officio, non-voting members and also creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the State's programs, policies, and investments related to climate change.

(e) Cap-and-Trade Program

The 2008 Climate Change Scoping Plan identifies a cap-and-trade program as one of the strategies for California to reduce GHG emissions. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap are able to trade permits to emit GHGs within the overall limit. According to CARB, a

[37] *CARB, 2017 Update, November 2017, p. 7.*

cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020.[38] CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32 and the State Legislature extended the Program through 2030 with the adoption of AB 398.

The Cap-and-Trade Program is designed to reduce GHG emissions from major sources, such as refineries and power plants, (deemed "covered entities"). "Covered entities" subject to the Cap-and-Trade Program are sources that emit more than 25,000 metric tons of CO_2e ($MTCO_2e$) per year. Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or MRR).

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or in part (if eligible) and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender an allowance for each metric ton CO_2e of GHG they emit.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on a cumulative basis. As summarized by CARB in the 2014 Update:

> *The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced.*

For example, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a commensurate reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions

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[38] *With continuation of the Cap-and-Trade Program, the State can achieve a 40-percent reduction target by 2030.*

is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> *The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap.*[39] *[…]*
>
> *[T]he Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions.*[40]

Overall, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures.

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions.[41]

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[39] *CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, p. 88, May 2014.*

[40] *CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, pp. 86-87, May 2014.*

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with vehicle miles traveled (VMT) are covered by the Cap-and-Trade Program.

AB 398 was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

(f) Energy-Related Sources

(i) California Renewables Portfolio Standard

The California RPS program (SB 1078; 2002) requires 20 percent of available energy supplies to come from renewable energy sources by 2017. In 2006, SB 107 accelerated the 20 percent mandate to 2010. These mandates apply directly to investor-owned utilities. On April 12, 2011, Governor Brown signed into law SB 2X, which modified California's RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 2X also required regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016.

In 2017, Southern California Edison (SCE), which provides electricity to the Project Site, indicated 29 percent of its electricity came from renewable sources.[42] Therefore,

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[41] *Center for Climate and Energy Solutions, California Cap and Trade, www.c2es.org/us-states-regions/key-legislation/california-cap-trade, accessed June 19, 2019.*

[42] *California Energy Commission, SCE's 2017 Power Content Label.*

under SB 2X, SCE will need to increase its electricity from renewable sources by an additional 4 percent to comply with the RPS requirement of 33 percent.

(ii) Senate Bill 350

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase the procurement of electricity from renewable sources from 33 percent to 50 percent by 2030; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.[43]

(iii) Senate Bill 100

SB 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California's Renewable Portfolio Standard and SB 350, as discussed above, to the following: achieve 50-percent renewable resources target by December 31, 2026, and achieve a 60-percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.[44]

(iv) Senate Bill 1368

SB 1368, a companion bill to AB 32, requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per MWh. Furthermore, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per MWh (see CEC Order No. 07-523-7).

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[43] SB 350 (2015–2016 Reg, Session) Stats 2015, ch. 547.

[44] SB 100 (2017–2018 Reg. Session) Stats 2018, ch. 312.

(g) Mobile Sources

(i) Assembly Bill 1493 (Pavley I)

AB 1493, passed in 2002, requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by non-commercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. CARB originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. On September 24, 2009, CARB adopted amendments to these Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.[45] Although setting emission standards on automobiles is solely the responsibility of the USEPA, the federal CAA allows California to set state-specific emission standards on automobiles if the State first obtains a waiver from the USEPA. The USEPA granted California that waiver on July 1, 2009. A comparison between the AB 1493 standards and the Federal CAFE standards was completed by CARB and the analysis determined that California emission standards are 16 percent more stringent through the 2016 model year and 18 percent more stringent for the 2020 model year.[46] CARB is also committed to further strengthening these standards beginning with 2020 model year vehicles to obtain a 45-percent GHG reduction in comparison to the 2009 model year. However, on August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and revoke California's waiver under the Clean Air Act to establish more stringent standards.[47]

(ii) Executive Order S-1-07 (California Low Carbon Fuel Standard)

Executive Order S-1-07, the LCFS (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. Regulatory proceedings and implementation of the LCFS were directed to CARB. CARB released a draft version of the LCFS in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day.

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45 *CARB, Clean Car Standards—Pavley, Assembly Bill 1493, www.arb.ca.gov/cc/ccms/ccms.htm, last reviewed January 11, 2017, accessed June 19, 2019.*

46 *CARB, "Comparison of Greenhouse Gas Reductions for all Fifty United States under CAFE Standards and ARB Regulations Adopted Pursuant to AB 1493," January 23, 2008.*

47 *Proposed Rule: The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, www.regulations.gov/document?D=EPA-HQ-OAR-2018-0283-0756, accessed June 19, 2019.*

The 2017 Update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In calculating statewide emissions and targets, the 2017 Update has assumed that the LCFS be extended to an 18-percent reduction in carbon intensity beyond 2020. CARB has recently proposed a carbon intensity reduction of 20 percent by 2030, in order to meet the 2030 emissions target. However, as of December 2018, the updated LCFS carbon intensity reduction has not been formally adopted.

(iii) Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015–2025.[48] The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.[49] In March 2017, CARB voted unanimously to continue with the vehicle greenhouse gas emission standards and the ZEV program for cars and light trucks sold in California through 2025.[50]

(iv) Senate Bill 375

Acknowledging the relationship between land use planning and transportation sector GHG emissions, SB 375 was signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating employment opportunities close to transit. Under SB 375, each Metropolitan Planning Organization (MPO) would be required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger VMT and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. If the SCS is unable to achieve the regional GHG emissions reduction targets, then the MPO is required to prepare an alternative planning strategy that shows how the GHG emissions

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[48] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc_conceptdraft.htm, last reviewed by CARB September 1, 2017, accessed June 19, 2019.*

[49] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc_conceptdraft.htm, last reviewed by CARB September 1, 2017, accessed June 19, 2019.*

[50] *CARB, News Release: CARB finds vehicle standards are achievable and cost-effective, ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective, accessed June 19, 2019.*

reduction target could be achieved through alternative development patterns, infrastructure, and/or transportation measures.

As required under SB 375, CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 updates, CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the previous reduction target of 13 percent for 2035.[51,52]

(v) Senate Bill 743

Governor Brown signed SB 743 in 2013, which creates a process to change the way transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.”[53] Measurements of transportation impacts may include “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.”[54]

(h) Building Standards

(i) California Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608)

The 2014 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

(ii) California Building Energy Efficiency Standards (Title 24, Part 6)

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations (CCR) and

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[51] *CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets (2018).*

[52] *As the CARB targets were adopted after SCAG’s most recently adopted SCS, it is expected that the updated targets will be incorporated into SCAG’s next SCS.*

[53] *PRC Section 21099(b)(1).*

[54] *PRC Section 21099(b)(1).*

commonly referred to as Title 24, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.[55] The CEC adopted the 2016 Title 24 standards, which became effective on January 1, 2017, and are applicable to the Project.[56] The 2016 standards continue to improve upon the 2013 Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.[57]

(iii) California Green Building Standards (CALGreen Code)

The most recent update to the California Green Building Standards Code (CCR Title 24, Part 11), commonly referred to as the 2016 CALGreen Code, went into effect on January 1, 2017. Most of the mandatory measure changes in the 2016 CALGreen Code relative to the previous 2013 CALGreen Code were related to definitions and to the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to energy that were added or revised affect electric vehicle chargers and hot water recirculation systems. For new multi-family dwelling units, the residential mandatory measures were revised to provide additional electric vehicle charging space requirements, including quantity, location, size, single EV space, multiple EV spaces, and identification.[58] For non-residential mandatory measures, the table (Table 5.106.5.3.3) identifying the number of required EV charging spaces has been revised in its entirety.[59]

(i) Senate Bill 97

On June 19, 2008, OPR released a technical advisory on addressing climate change. This guidance document outlines suggested components to CEQA disclosure, including quantification of GHG emissions from a project's construction and operation;

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[55] *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed June 19, 2019.*

[56] *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed June 19, 2019.*

[57] *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed June 19, 2019.*

[58] *California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 4—Residential Mandatory Measures, effective January 1, 2017.*

[59] *California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 5—Nonresidential Mandatory Measures, effective January 1, 2017.*

determination of significance of the project's impact to climate change; and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

SB 97, passed in August 2007, is designed to work in conjunction with CEQA and AB 32. SB 97 requires OPR to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including, but not limited to, the effects associated with transportation and energy consumption. The Draft Guidelines Amendments for Greenhouse Gas Emissions (Guidelines Amendments) were adopted on December 30, 2009, and address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments.[60] The Guidelines Amendments require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[61]

The administrative record for the Guidelines Amendments also clarifies that "the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act's requirements for cumulative impact analysis."[62]

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[60] *See 14 CCR Section 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).*

[61] *14 CCR. Section 15064.4(b).*

The California Natural Resources Agency is required to periodically update the Guidelines Amendments to incorporate new information or criteria established by CARB pursuant to AB 32. SB 97 applies retroactively to any environmental impact report (EIR), negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

(3) Regional

(a) South Coast Air Quality Management District

The Southern California Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[63] Within its October 2008 document, SCAQMD proposed the use of a percent emission reduction target to determine significance for residential/commercial projects that emit greater than 3,000 $MTCO_2e$ per year. Under this proposal, residential/ commercial projects that emit fewer than 3,000 $MTCO_2e$ per year would be assumed to have a less-than-significant impact on climate change. On December 5, 2008, the

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[62] *Letter from Cynthia Bryant, Director of the Governor's Office of Planning and Research to Mike Chrisman, California Secretary for Natural Resources, dated April 13, 2009.*

[63] *SCAQMD, Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, Attachment E.*

SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where SCAQMD is the lead agency. However, SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects); therefore, the proposed residential/commercial thresholds were not formally adopted.

(b) Southern California Association of Governments

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2016–2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016–2040 RTP/SCS) on April 7, 2016.[64,65] The 2016–2040 RTP/SCS reaffirms the land use policies that were incorporated into the 2012–2035 RTP/SCS. These foundational policies, which guided the development of the 2016–2040 RTP/SCS's strategies for land use, include the following:

- Identify regional strategic areas for infill and investment;
- Structure the plan on a three-tiered system of centers development;[66]
- Develop "Complete Communities";
- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for changing demand in types of housing;
- Continue to protect stable, existing single-family areas;
- Ensure adequate access to open space and preservation of habitat; and
- Incorporate local input and feedback on future growth.

The 2016–2040 RTP/SCS recognizes that transportation investments and future land use patterns are inextricably linked, and continued recognition of this close

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[64] *SCAG, 2016–2040 RTP/SCS.*

[65] *SCAG, Executive Order G-16-066, SCAG 2016 SCS ARB Acceptance of GHG Quantification Determination, June 2016.*

[66] *Complete language: "Identify strategic centers based on a three-tiered system of existing, planned and potential relative to transportation infrastructure. This strategy more effectively integrates land use planning and transportation investment." A more detailed description of these strategies and policies can be found on pp. 90–92 of the SCAG 2008 Regional Transportation Plan, adopted in May 2008.*

relationship will help the region make choices that sustain existing resources and expand efficiency, mobility, and accessibility for people across the region. In particular, the 2016–2040 RTP/SCS draws a closer connection between where people live and work, and it offers a blueprint for how Southern California can grow more sustainably. The 2016–2040 RTP/SCS also includes strategies focused on compact infill development and economic growth by building the infrastructure the region needs to promote the smooth flow of goods and easier access to jobs, services, educational facilities, healthcare and more.

The 2016–2040 RTP/SCS states that the SCAG region is home to about 18.3 million people in 2012 and currently includes approximately 5.9 million homes and 7.4 million jobs.[67] By 2040, the integrated growth forecast projects that these figures will increase by 3.8 million people, with nearly 1.5 million more homes and 2.4 million more jobs. High Quality Transit Areas (HQTAs) will account for 3 percent of regional total land but are projected to accommodate 46 percent and 55 percent of future household and employment growth respectively between 2012 and 2040.[68] The 2016–2040 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's HQTAs. HQTAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

The 2016–2040 RTP/SCS is expected to reduce per capita transportation emissions by 8 percent by 2020 and 18 percent by 2035.[69] Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016–2040 RTP/SCS's GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.[70] The 2016–2040 RTP/SCS would result in an estimated 21-percent decrease in per capita passenger vehicle GHG emissions by 2040. By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an approximately 21-percent decrease in per capita passenger vehicle GHG emissions by 2040 (an additional 2-percent reduction in the five years between 2035 [19 percent] and 2040 [21 percent]), the 2016–2040 RTP/SCS is expected to fulfill and

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[67] *2016–2040 RTP/SCS population growth forecast methodology includes data for years 2012, 2020, 2035, and 2040.*

[68] *Defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours*

[69] *SCAG, Final 2016–2040 RTP/SCS, Executive Summary, p. 8, April 2016.*

[70] *SCAG, Final Program Environmental Impact Report for 2016–2040, RTP/SCS, April 2016, Figure 3.8.4-1.*

exceed its portion of SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

Subsequent to adoption of the 2016–2040 RTP/SCS, CARB adopted in 2018 a new target requiring a 19-percent decrease in VMT for the SCAG region by 2035. It is expected that this new target will be incorporated into the next RTP/SCS. The 2016–2040 RTP/SCS and/or the next RTP/SCS are therefore expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

(4) Local

(a) City of Long Beach General Plan

Local jurisdictions, such as the City of Long Beach, have the authority and responsibility to reduce greenhouse gas emissions through their police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of greenhouse gas emissions resulting from its land use decisions.

The Air Quality Element of the City of Long Beach General Plan was adopted in 1996 and sets forth the goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. While the Air Quality Element does not specifically address climate change, reductions in other pollutants typically lead to a reduction in GHG emissions. This Element acknowledges the interrelationships among transportation and land use planning in meeting the City's goals. The following goals and policies are applicable to the Project.

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

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

Action 7.1.4: Encourage the incorporation of energy conservation features in the design of all new construction

Action 7.1.7: Support efforts to reduce GHG emissions that diminish the stratospheric ozone layer.

(b) City of Long Beach Draft Climate Action and Adaption Plan

The City is currently in the process of preparing a Climate Action and Adaptation Plan (CAAP), which will satisfy the requirements of SB 97 and CEQA Guidelines Section 15064(h)(3). The goals of the CAAP are to: reduce future GHG emissions in order to achieve AB 32 targets; and prepare the City for the impacts of climate change, specifically rising sea levels, extreme heat, and poor air quality. The CAAP will provide a framework for creating and updating policies, programs, and practices to reduce the City's GHG footprint, while incentivizing residents and businesses to comply. Through the City Inventory Reporting and Information System (CIRIS), the City will have a framework for calculating and reporting GHG emissions and forecasting projected emissions based on anticipated growth. The CAAP will include an analysis of existing sustainability and climate mitigation efforts and set forth strategies to reduce future emissions and impacts. Eventually, the CAAP will produce a plan to monitor the performance of the City's GHG mitigation strategies.

Workshops are currently being held to gather public input on the CAAP, with adoption expected by the end of 2019.

(c) City of Long Beach Sustainable City Action Plan

The City adopted the Long Beach Sustainable City Action Plan (Sustainable City Action Plan) on February 2, 2010. This plan is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. The Sustainable City Action Plan includes measurable goals and actions that are intended to be challenging, yet realistic. The following goals are applicable to the Project:

- **Buildings & Neighborhoods Initiative 1:** Accelerate the use of green buildings techniques in new development, renovations and retrofits to improve building efficiency and health.

  Goal: At least 5 million square feet of privately developed LEED certified (or equivalent) green buildings by 2020.

- **Buildings & Neighborhoods Initiative 3:** Enhance our community to encourage people to get out of their cars and into their neighborhoods.

  Goal: By 2020, at least 30 percent of Long Beach residents use alternative transportation to get to work.

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

  Goal: By 2020 reduce community electricity use by 15 percent and natural gas use by 10 percent.

- **Transportation Initiative 1:** Reduce emissions and improve air quality by moving toward more fuel efficient and alternative fuel vehicles.

Goal: Reduce vehicle emissions by 30 percent by 2020.

- **Waste Reduction Initiative 1:** Increase diversion by reducing waste and increasing recycling and reuse.

  Goal: Annual reduction in average pounds of solid waste generated per person per day.

- **Water Reduction Initiative 1:** Ensure a sustainable water supply through conservation and reduced dependence on imported water.

  Goal: Reduce per capita use of potable water, exceeding the State mandate to achieve a demand reduction of 20 percent in per capita water use by the year 2020.

(d) City of Long Beach Green Building Ordinance

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

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

d. Existing Conditions

(1) Existing Statewide GHG Emissions

GHGs are the result of both natural and human-influenced activities. Regarding human-influenced activities, motor vehicle travel, consumption of fossil fuels for power generation, industrial processes, heating and cooling, landfills, agriculture, and wildfires are the primary sources of GHG emissions. Without human intervention, Earth maintains an approximate balance between the emission of GHGs into the atmosphere and the storage of GHGs in oceans and terrestrial ecosystems. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have contributed to the rapid increase in atmospheric levels of GHGs over the last 150 years. As reported by the CEC, California contributes 1.4 percent of global and 6.2 percent of national GHG emissions.[71] California represents approximately 12 percent of the national population. Approximately 80 percent of GHGs in California are CO_2 produced from fossil fuel combustion. The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 to 2012.[72] It includes estimates for CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. The GHG inventory for California for years 2010 through 2016 is presented in Table IV.C-3 on page IV.C-33. As shown therein, the GHG inventory for California in 2016 was 429.35 million $MTCO_2e$.

(2) Existing Project Site Emissions

The majority of the Project Site is currently developed with a surface parking lot, consisting of 80 vehicular parking spaces and an automated pay station. There are no habitable structures or landscaping within the parking lot, and concrete retaining walls line the northern and eastern site boundaries. The northern part of the Project Site includes a portion of Victory Park, which currently houses a temporary public art project known as "The Loop," along with seating areas and landscaping. A Long Beach Bike Share station is located at the northwestern corner of the Project Site. One street tree is located along Ocean Boulevard, and eight street trees are located along Pine Avenue adjacent to the Project Site.

Mobile source emissions generated by motor vehicle trips to and from the Project Site are assumed to be associated with surrounding/nearby land uses and not the surface parking lot (i.e., there would be no vehicle trips to the surface parking lots without the surrounding/nearby land uses). Thus, existing operation of the Project Site is not considered to be a substantial source of pollutant emissions. To present a conservative analysis, the existing emissions from the Project Site were assumed to be zero.

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[71] *CEC, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, CEC-600-2006-013, October 2006.*

[72] *A carbon inventory identifies and quantifies sources and sinks of greenhouse gases. Sinks are defined as a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period.*

Table IV.C-3
California GHG Inventory
(million metric tons CO_2e)

	2010	2011	2012	2013	2014	2015	2016
Transportation	165.07	161.51	161.22	160.90	162.28	166.14	169.38
On Road	151.20	148.03	147.71	147.07	148.04	151.52	154.64
Passenger Vehicles	114.13	111.37	111.77	111.52	112.20	116.33	119.03
Heavy Duty Trucks	37.07	36.65	35.93	35.55	35.83	35.19	35.62
Ships & Commercial Boats	3.66	3.52	3.43	3.42	3.49	3.42	3.24
Aviation (Intrastate)	3.84	3.73	3.75	3.93	3.90	4.22	4.44
Rail	2.24	2.38	2.38	2.38	2.38	2.38	2.37
Off Road	2.03	2.13	2.23	2.33	2.43	2.53	2.63
Unspecified	2.09	1.72	1.71	1.77	2.04	2.07	2.07
Percent of Total Emissions	*37%*	*36%*	*36%*	*36%*	*37%*	*38%*	*39%*
Electric Power	90.34	88.06	95.09	89.65	88.24	83.67	68.58
In-State Generation	46.75	41.20	51.03	49.47	51.72	49.93	42.30
Natural Gas	40.59	35.92	45.77	45.66	46.43	45.16	38.28
Other Fuels	5.05	4.03	4.44	2.91	4.40	3.65	2.55
Fugitive and Process Emissions	1.10	1.25	0.82	0.90	0.90	1.13	1.48
Imported Electricity	43.59	46.86	44.07	40.17	36.51	33.74	26.28
Unspecified Imports	13.45	15.52	17.48	11.82	13.44	11.21	9.68
Specified Imports	30.14	31.34	26.59	28.35	23.07	22.52	16.60
Percent of Total Emissions	*20%*	*20%*	*21%*	*20%*	*20%*	*19%*	*16%*
Commercial and Residential	45.05	45.50	42.89	43.54	37.37	37.94	39.36
Residential Fuel Use	29.19	29.64	27.34	28.14	22.87	23.29	24.20
Natural Gas	26.99	27.51	25.76	26.52	21.58	21.90	22.80
Other Fuels	2.21	2.13	1.58	1.62	1.28	1.39	1.40
Commercial Fuel Use	13.58	13.71	13.41	13.30	12.51	12.67	12.92
Natural Gas	11.17	11.33	11.25	11.28	10.39	10.50	10.89
Other Fuels	2.41	2.38	2.16	2.02	2.12	2.16	2.03
Commercial Cogeneration Heat Output	0.92	0.78	0.76	0.71	0.58	0.56	0.81
Other Commercial and Residential	1.36	1.37	1.38	1.40	1.41	1.42	1.43
Percent of Total Emissions	*10%*	*10%*	*10%*	*10%*	*8%*	*9%*	*9%*
Industrial	91.50	90.94	91.07	93.73	93.96	91.58	89.61
Refineries	30.46	30.12	29.88	29.22	29.40	28.21	29.61
General Fuel Use	17.93	18.78	18.91	19.31	19.87	19.23	18.53
Natural Gas	13.46	14.50	14.48	14.36	15.56	14.79	14.99
Other Fuels	4.47	4.28	4.43	4.94	4.31	4.45	3.53
Oil & Gas Extraction[a]	16.80	16.73	16.73	19.11	19.47	19.58	17.93
Fuel Use	15.01	14.91	14.87	16.99	17.18	17.22	15.66
Fugitive Emissions	1.80	1.82	1.86	2.12	2.29	2.36	2.27

Table IV.C-3 (Continued)
California GHG Inventory
(million metric tons CO_2e)

	2010	2011	2012	2013	2014	2015	2016
Cement Plants	5.57	6.14	6.92	7.20	7.61	7.56	7.60
Clinker Production	3.46	4.08	4.65	4.93	5.27	5.17	5.15
Fuel Use	2.11	2.07	2.26	2.28	2.34	2.39	2.45
Cogeneration Heat Output	12.61	11.15	10.81	10.99	9.64	8.98	8.00
Other Process Emissions	8.13	8.02	7.81	7.90	7.98	8.01	7.95
Percent of Total Emissions	*20%*	*20%*	*20%*	*21%*	*21%*	*21%*	*21%*
Recycling and Waste	8.37	8.47	8.49	8.52	8.59	8.73	8.81
Landfills[b]	8.11	8.19	8.20	8.22	8.28	8.40	8.47
Composting	0.26	0.27	0.29	0.30	0.31	0.33	0.34
Percent of Total Emissions	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*
High Global Warming Potential	13.52	14.54	15.54	16.65	17.70	18.93	19.78
Ozone Depleting Substance Substitutes	13.20	14.21	15.25	16.38	17.42	18.37	19.24
Electricity Grid SF6 Losses[c]	0.24	0.25	0.24	0.18	0.14	0.42	0.37
Semiconductor Manufacturing[b]	0.08	0.08	0.06	0.08	0.14	0.14	0.16
Percent of Total Emissions	*3%*	*3%*	*3%*	*4%*	*4%*	*4%*	*5%*
Agriculture[d]	34.27	34.89	36.08	34.61	35.95	34.41	33.84
Livestock	24.00	23.84	24.47	23.49	23.81	23.10	22.99
Enteric Fermentation (Digestive Process)	12.13	11.98	12.10	11.78	11.85	11.40	11.35
Manure Management	11.86	11.86	12.38	11.71	11.96	11.70	11.64
Crop Growing & Harvesting	7.50	7.40	7.73	7.42	7.48	6.91	6.89
Fertilizers	5.78	5.67	5.93	5.65	5.72	5.28	5.25
Soil Preparation and Disturbances	1.64	1.65	1.73	1.69	1.68	1.56	1.56
Crop Residue Burning	0.08	0.08	0.08	0.08	0.08	0.08	0.08
General Fuel Use	2.77	3.65	3.88	3.71	4.66	4.39	3.95
Diesel	1.96	2.52	2.47	2.53	3.54	3.66	3.19
Natural Gas	0.65	0.66	0.70	0.69	0.63	0.64	0.72
Gasoline	0.16	0.48	0.71	0.49	0.49	0.10	0.04
Other Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Total Emissions	*8%*	*8%*	*8%*	*8%*	*8%*	*8%*	*8%*
Total Net Emissions	448.11	443.91	450.38	447.59	444.10	441.40	429.35

[a] *Reflects emissions from combustion of fuels plus fugitive emissions.*
[b] *These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.*
[c] *This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors.*
[d] *Reflects use of updated USEPA models for determining emissions from livestock and fertilizers.*

Source: California GHG Inventory for 2000–2016—by Category as Defined in the 2008 Climate Change Scoping Plan million metric tons of CO_2e—(based upon IPCC Second Assessment Report's Global Warming Potentials).

3. Project Impacts

a. Methodology

Amendments to CEQA Guidelines Section 15064.4 were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. If a qualitative analysis is used, in addition to quantification, this section recommends certain qualitative factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs). Lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as CAPCOA, so long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified the following: the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts; and such impacts should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15064(h)(3)).[73]

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. As discussed previously, the City has established goals and actions to reduce the generation and emission of GHGs from both public and private activities in the City's Sustainable City Action Plan. Under CEQA, when no guidance exists, the lead agency may look to and assess general compliance with comparable regulatory schemes.[74]

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[73] *See, generally, California Natural Resources Agency, Final Statement of Reasons for Regulatory Action (December 2009), pp. 11-13, 14, 16; see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, April 13, 2009. Available at http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf, accessed June 19, 2019.*

[74] *See Protect Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal. App. 4th 1099, 1107 ['[A] lead agency's use of existing environmental standards in determining the significance of a project's environmental impacts is an effective means of promoting consistency in significance determinations and integrating CEQA environmental review activities with other environmental program planning and resolution."]. Lead agencies can, and often do, use regulatory agencies' performance standards. A project's compliance with these standards usually is presumed to provide an adequate level of protection for environmental resources. See, e.g., Cadiz Land Co. v. Rail Cycle (2000) 83 Cal.App.4th 74, 99 (upholding use of regulatory agency performance standard).*

In evaluating climate change impacts, OPR recommends consideration of the Project's consistency with the State's long-term climate goals or strategies to reduce GHG emissions.[75] The lead agency may also use modeling to estimate a Project's contribution to climate change by preparing an emissions inventory. As the lead agency, the City of Long Beach has recommended that a Project's potential impact with regard to climate change be evaluated solely based on consistency with the relevant climate change plans. The Project's GHG emissions are calculated for informational purposes but are not compared to a numeric threshold.

(1) Consistency with Plans

The Project's GHG impacts are evaluated by assessing the Project's consistency with applicable GHG reduction strategies and local actions adopted by the City. As discussed previously, the City has established goals and actions to reduce the generation and emission of GHGs from both public and private activities in the City's Sustainable City Action Plan.

OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. The City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan as recommended in the relevant amendments to the CEQA Guidelines. However, the City has adopted the City's Sustainable City Action Plan that encourages and requires applicable projects to implement energy efficiency measures. In addition, the California CAT Report provides recommendations for specific emission reduction strategies for reducing GHG emissions and reaching the targets established in AB 32 and Executive Order S-3-05. Thus, if the Project is designed in accordance with these policies and regulations, the Project would result in a less-than-significant impact, because it would be consistent with the overarching State regulations on GHG reduction (AB 32).

A consistency analysis is provided below and describes the Project's compliance with or exceedance of performance-based standards included in the regulations outlined in the applicable portions of the 2008 Climate Change Scoping Plan and subsequent updates, the 2016–2040 RTP/SCS, and the City's Sustainable City Action Plan.

(2) Quantification of Emissions

In view of the above considerations, the City has elected to quantify the Project's total annual GHG emissions, taking into account the GHG emission reduction measures

[75] *OPR, Proposed Updates to the CEQA Guidelines, November 2017.*

that would be incorporated into the Project's design (Reduction Features). However, given the lack of a formally adopted numerical significance threshold or a formally adopted local plan for reducing GHG emissions applicable to this Project, the City assesses the significance of the Project's GHG emissions by comparing them to the SCAQMD's draft Tier 4 performance standards in the context of an assessment of the Project's consistency with regulatory schemes, which are comparable to formally adopted local GHG emission reduction plans and are designed to reduce GHG emissions by encouraging development located and designed to result in the efficient use of resources.

By quantifying and comparing the Project's annual GHG emissions to a Project without Reduction Features scenario, as defined by CARB's most updated GHG reduction projections pursuant to AB 32, this EIR provides quantitative metrics for describing the GHG efficiency of the Project and the level of GHG reductions incorporated into the Project. The Project without Reduction Features scenario does not account for energy efficiency measures that would exceed Title 24 standards and does not account for trip reductions from co-location of uses and availability of public transportation within a quarter-mile. This comparison is provided for informational purposes only. The City instead assesses the Project's GHG emissions in relation to the Project's location and design and its consistency with applicable regulatory schemes as a qualitative threshold in accordance with CEQA Guidelines Section 15064.4.

(3) Project GHG Emissions

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG emissions from a number of general and industry-specific activities.[76] The General Reporting Protocol is based on the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" developed by the World Business Council for Sustainable Development and the World Resources Institute through "a multi-stakeholder effort to develop a standardized approach to the voluntary reporting of GHG emissions."[77] Although no numerical thresholds of significance have been developed and no specific protocols are available for land use projects, the General Reporting Protocol provides a basic framework for calculating and reporting GHG emissions from the project. The information provided in this section is consistent with the General Reporting Protocol's reporting requirements. A detailed discussion of the GHG methodology is included in Appendix B of this Draft EIR.

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[76] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

[77] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

The General Reporting Protocol recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions. They include the following:

- Scope 1: Direct, onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, offsite emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater).[78]

The General Reporting Protocol provides a range of basic calculations methods. However, the General Reporting Protocol calculations are typically designed for existing buildings or facilities. These retrospective calculation methods are not directly applicable to planning and development situations where buildings do not yet exist.

CARB recommends consideration of indirect emissions to provide a more complete picture of the GHG footprint of a facility. Annually reported indirect energy usage aids the conservation awareness of a facility and provides information to CARB to be considered for future strategies.[79] For example, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements. Additionally, OPR has noted that lead agencies "should make a good-faith effort, based on available information, to calculate, model, or estimate…GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities."[80] Therefore, direct and indirect emissions have been calculated for the Project.

A fundamental difficulty in the analysis of GHG emissions is the global nature of the existing and cumulative future conditions. Changes in GHG emissions can be difficult to attribute to a particular planning program or project because the planning effort or project may cause a shift in the locale for some type of GHG emissions, rather than causing "new"

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[78] *Embodied energy is a scientific term that refers to the quantity of energy required to manufacture and supply to the point of use a product, material, or service.*

[79] *CARB, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), Planning and Technical Support Division Emission Inventory Branch, October 19, 2007.*

[80] *OPR Technical Advisory, p. 5.*

GHG emissions. As a result, there is an inability to conclude whether a project's GHG emissions represent a net global increase, reduction, or no change in GHGs that would exist if the project were not implemented. The analysis of the Project's GHG emissions is particularly conservative in that it assumes all of the GHG emissions are new additions to the atmosphere.

The California Emissions Estimator Model (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California, who provided data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) to account for local requirements and conditions. The model is considered by SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.[81]

(a) Construction

The Project's construction emissions were calculated using CalEEMod Version 2016.3.2. Details of the modeling assumptions and emission factors are provided in Appendix B of this Draft EIR. CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from the SCAQMD recommended CalEEMod. The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment that would be used to remove existing pavement, grade and excavate the Project Site, construct the proposed building and related improvements, and plant new landscaping within the Project Site.

In accordance with SCAQMD's guidance, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the Project. As impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. Therefore, SCAQMD recommended that construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part

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[81] *California Air Pollution Control Officers Association, California Emissions Estimator Model, CalEEMod™, www.caleemod.com, accessed June 19, 2019.*

of the operational GHG reduction strategies.[82] Thus, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

(b) Operation

Similar to construction, the SCAQMD-recommended CalEEMod is used to calculate potential GHG emissions generated by new land uses on the Project Site, including area sources, electricity, natural gas, mobile sources, stationary sources (i.e., emergency generators), solid waste generation and disposal, and water usage/wastewater generation.

Area source emissions include landscaping equipment, which are based on the size of the land uses (e.g., square footage or dwelling unit), the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted.

Emissions of GHGs associated with electricity demand are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. As with electricity, the emissions of GHGs associated with natural gas combustion are based on the size of the land uses, the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu), the GHG emission factors for natural gas combustion, and the GWP values for the GHGs emitted.

Mobile source GHG emissions are calculated based on an estimate of the Project's annual VMT, which is derived using CalEEMod based on the trip generation provided in the Project's Traffic Impact Study.[83] The CalEEMod-derived VMT values account for the daily and seasonal variations in trip frequency and length associated with new guest, employee, and visitor trips to and from the Project Site and other activities that generate a vehicle trip.

Stationary source GHG emissions are based on proposed stationary sources (i.e., emergency generators) that would be provided on the Project Site.

The GHG emissions associated with solid waste disposal are based on the size of the Project's proposed land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted.

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[82] *SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008.*

[83] *Fehr & Peers, 100 E. Ocean Boulevard Transportation Impact Analysis, January 2019 refer to Appendix E.1 of this Draft EIR.*

The GHG emissions related to water usage and wastewater generation are based on the size of the land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution, electrical intensity factors for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted.

The GHG emissions calculations for the Project include credits or reductions for consistency with applicable project design features set forth in this Draft EIR. The analysis of Project GHG emissions at buildout also takes into account actions and mandates already approved and expected to be in force by Project buildout (e.g., Pavley I Standards, full implementation of California's Statewide RPS beyond current levels of renewable energy, and the California LCFS).[84] It should be noted that GHG reductions due to LCFS are currently not incorporated into CalEEMod. As a conservative assumption, LCFS reductions were not accounted for in the Project's GHG emissions inventory. In addition, as mobile source GHG emissions are directly dependent on the number of vehicle trips, a decrease in the number of project-generated trips as a result of project features (e.g., close proximity to transit) would provide a proportional reduction in mobile source GHG emissions compared to a generic project without such locational benefits. Calculation of Project emissions conservatively did not include actions and mandates that are not already in place, but are anticipated to be enforced in by Project buildout (e.g., Pavley II, which could further reduce GHG emissions from use of light-duty vehicles by 2.5 percent). Similarly, emissions reductions regarding cap-and-trade were not included in this analysis. By not speculating on potential regulatory conditions, the analysis takes a conservative approach that likely overestimates the Project's GHG emissions at buildout because the State is expected to implement a number of policies and programs aimed at reducing GHG emissions from the land use and transportation sectors to meet the State's long-term climate goals.

b. Thresholds of Significance

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

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

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84 *Project design features are based on relevant year 2020 targets established by AB 32 and the current CARB Scoping Plan Update.*

CEQA Guidelines Section 15064.4 recommends that lead agencies consider several factors that may be used in the determination of significance of project-related GHG emissions, including: the extent to which the project may increase or reduce GHG emissions; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)).[85] As a note, the CEQA Guidelines were amended in response to SB 97 to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project.[86] To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.[87] Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions."[88] Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a

[85] *See, generally, CEQA Guidelines Section 15130(f); see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, dated April 13, 2009.*

[86] *14 CCR Section 15064(h)(3).*

[87] *14 CCR Section 15064(h)(3).*

[88] *14 CCR Section 15064(h)(3).*

project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.[89]

In the absence of any adopted, numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. For this Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2016–2040 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long-term climate goals. This analysis also considers consistency with regulations or requirements adopted by the 2008 Climate Change Scoping Plan and subsequent plans and the City of Long Beach's Sustainability City Action Plan.

c. Project Design Features

As discussed in Section II, Project Description, of this Draft EIR, the Project incorporates features to support and promote environmental sustainability. "Green" principles have been incorporated in the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013) and the Project has been designed to achieve the U.S. Green Building Council's LEED Silver® certification. Specific energy conservation, water conservation, and waste reduction features include, but are not limited to, the following:

Project Design Feature GHG-1: The design of the new buildings shall incorporate features of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) program to be capable of

[89] *See, for example, San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance tor Projects Subject to ARB's GHG Cap-and-Trade Regulation, APR—2030 (June 25, 2014), in which the SJVAPCD "determined that GHG emissions increases that are covered under ARB's Cap-and-Trade regulation cannot constitute significant increases under CEQA…" Further, SCAQMD has taken this position in CEQA documents it has produced as a lead agency. SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact Report that demonstrate SCAQMD has applied its 10,000 $MTCO_2e$ /yr. significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See: SCAQMD, Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project, SCH No. 2012041014 (October 2014); SCAQMD, Final Negative Declaration tor Phillips 66 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project, SCH No. 2013091029 (December 2014); Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA, SCH No. 2014101040 (December 2014); and Draft Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project, SCH No. 2014121014 (April 2014).*

meeting the standards of LEED Silver® or equivalent green building standards under LEED v4. Specific sustainability features that are integrated into the Project design to enable the Project to achieve LEED Silver® certification will include, but are not limited to the following:

a. Meeting or exceeding Title 24, Part 6, California Energy Code baseline standard requirements by 10 percent for energy efficiency, based on the 2016 Building Energy Efficiency Standards requirements.

b. Use of Energy Star–labeled products and appliances.

c. Use of light-emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use.

d. Use of high-efficiency Energy Star-rated dishwashers and clothes washers where appropriate.

e. Incorporation of generous operable windows and high performance window glazing; and use of natural light.

f. Provision of conduit that is appropriate for future photovoltaic and solar thermal collectors.

g. Installation of a separate water meter (or submeter), flow sensor, and master valve shutoff for irrigated landscape areas totaling 5,000 square feet and greater.

h. Provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied.

i. Use of building materials with a minimum of 10 percent recycled-content for the construction of the Project.

j. Water-efficient plantings with drought-tolerant species; and

k. Pedestrian- and bicycle-friendly design with short-term and long-term bicycle parking.

Also refer to Project Design Feature TRA-2 detailed in Section IV.E, Transportation/ Traffic, of this Draft EIR which describes the Transportation Demand Management (TDM) Program proposed as part of the Project. TDM measures would include bicycle parking, bicycle rental, an active transportation-oriented ground floor, wayfinding signage, end-of-trip bicycle facilities, car share parking, car share membership, a guaranteed ride home program, pre-loaded transit cards/bike share passes, unbundled parking, hotel confirmation with multi-modal information, and in-room transportation options.

In addition, the Project would include a stormwater capture and reuse system designed to accommodate up to 3,102 cubic feet of stormwater and a flow rate of up to 0.28 cubic feet per second. This system would include underground steel reinforced polyethylene detention tanks with an irrigation reuse pump. The detention system would retain stormwater until it reaches the overflow pipe that connects to the existing storm drain system. The treated stormwater may be used for on-site irrigation, which would reduce water demand.

d. Analysis of Project Impacts

The Project would result in direct and indirect GHG emissions generated by different types of emissions sources, including:

- Construction: emissions associated with demolition of the existing parking areas, and construction-related equipment and vehicular activity;
- Area source: emissions associated with landscape equipment;
- Energy source (building operations): emissions associated with space heating and cooling, water heating, energy consumption, and lighting;
- Mobile source: emissions associated with vehicles accessing the Project Site;
- Stationary source: emissions associated with stationary equipment (e.g., emergency generators);
- Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and
- Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

Based on these conditions, the Project would generate an incremental contribution to and cumulative increase in sources of GHGs. A discussion regarding potential GHG emissions associated with the construction and operational phases of the Project is provided below.

(1) Construction

Project construction is anticipated to occur over approximately 30 months, with completion anticipated in 2022. It is estimated that grading would require approximately

23,500 cubic yards of soil removal and export.[90] A summary of construction details (e.g., schedule, equipment mix, and vehicular trips) and CalEEMod modeling input assumptions and output files are provided in Appendix B of this Draft EIR. The emissions of GHGs associated with construction of the Project were calculated for each year of construction activity. A summary of GHG emissions for each year of construction is presented in Table IV.C-4 on page IV.C-47.

As presented in Table IV.C-4, construction of the Project is estimated to generate a total of 1,931 metric tons of GHGs measured as an equivalent mass of carbon dioxide (CO_2e). As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.[91] Accordingly, when amortized, Project construction would generate an estimated 64 $MTCO_2e$ per year.

(2) Operation

(a) Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment, based on CalEEMod's default values for types of sources and emission factors. As shown in Table IV.C-5 on page IV.C-48, the Project is expected to result in a total of less than 1 $MTCO_2e$ per year from area sources.

(b) Electricity and Natural Gas Generation Emissions

GHGs are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; thus, electricity use in a building generally causes emissions in an indirect manner.

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[90] *Final earthwork numbers may change based on soil conditions.*

[91] *SCAQMD Governing Board Agenda Item 31, December 5, 2008.*

Table IV.C-4
Combined Construction-Related Emissions
($MTCO_2e$)

Year	$MTCO_2e$[a]
2020	941
2021	626
2022	363
Total	**1,930**
Amortized Over 30 Years[b]	**64**

[a] *$MTCO_2e$ = metric tons of an equivalent mass of carbon dioxide. CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Construction CalEEMod output file within Appendix B of this Draft EIR.*

[b] *As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.*

Source: Eyestone Environmental, 2019.

Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for SCE were selected in CalEEMod. Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod electricity and natural gas usage rates are based on the CEC-sponsored California Commercial End-Use Survey (CEUS) and California Residential Appliance Saturation Survey (RASS) studies.[92] The data are specific for climate zones; Zone 11 was selected for the Project Site based on the zip code tool. Since these studies are based on

[92] *CEC, Commercial End-Use Survey, March 2006, and California Residential Appliance Saturation Survey, October 2010.*

Table IV.C-5
Annual GHG Emissions Summary (Year 2019)[a]
(metric tons of carbon dioxide equivalent [$MTCO_2e$])

Scope	Project Without Reduction Measures	Project With Reduction Measures	Percent Reduction from Measures (Buildout)[b]
Area[b]	<1	<1	N/A
Energy[c]	2,096	2,015	4%
Mobile	5,255	2,060	61%
Stationary[d]	1	1	0%
Solid Waste[e]	206	64	69%
Water/Wastewater[f]	98	80	18%
Construction	64	64	0%
Total Emissions	**7,721**	**4,284**	**45%**

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Appendix B of this Draft EIR.*
[b] *Area source emissions are from landscape equipment.*
[c] *Energy source emissions are based on CalEEMod default electricity and natural gas usage rates.*
[d] *Stationary source emissions are from an on-site emergency generator.*
[e] *Solid waste emissions are calculated based on CalEEMod default solid waste generation rates.*
[f] *Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates.*
Source: Eyestone Environmental, 2019.

older buildings, CalEEMod provides adjustments to account for more stringent requirements under the 2016 Title 24 building codes.

As discussed above, the Project incorporates features to support and promote environmental sustainability. In particular, the Project has been designed to achieve LEED Silver® certification, which would serve to reduce Project energy consumption.

As shown in Table IV.C-5, Project GHG emissions resulting from electricity and natural gas usage would result in a total of 2,015 $MTCO_2e$ per year, which reflects a four percent reduction in energy emissions as compared to a Project without Reduction Measures.

(c) Mobile Source Emissions

Mobile-source emissions were calculated using the SCAQMD-recommended CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and VMT. The Project's trip generation estimates were provided by Fehr & Peers Transportation Consultants.[93] As discussed in Section IV.E, Transportation/Traffic, of this Draft EIR, to calculate daily trips, the number of hotel rooms and amount of building area for the restaurant uses were multiplied by the applicable trip generation rates based on the Institute of Transportation Engineers' (ITE) *Trip Generation, 10th Edition*.

CalEEMod calculates VMT based on the type of land use, trip purpose, and trip type percentages for each land use subtype associated with the Project (primary, diverted, and pass-by). The model assumes that diverted trips are 25 percent of the primary trip lengths; pass-by trips are assumed to be 0.1 mile in length and are a result of no diversion from the primary route. The Los Angeles County urban primary trip distance was selected for this analysis.

The Project's design also includes characteristics that would reduce trips and VMT as compared to a project without VMT reducing measures within the South Coast Air Basin (Air Basin), as measured by CalEEMod. The Project represents an infill development within an urbanized area that would introduce new uses on the Project Site, including new hotel and restaurant uses within an HQTA. The increase in land use diversity and the complementary mix of uses on the Project Site would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project Site is located within 0.25 mile of the Metro Blue Line Downtown Long Beach station, which would facilitate the use of mass transit, thereby reducing vehicle trips and miles travelled. The increase in transit accessibility and the bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project is also located in Downtown Long Beach, which would promote walking while reducing vehicle trips to and from the Project Site. The Project would also provide pedestrian access to minimize barriers and link the Project Site with existing streets to encourage people to walk instead of drive.

As shown in Table IV.C-5 on page IV.C-48, Project GHG emissions from mobile sources would result in a total of 2,060 $MTCO_2e$ per year, which accounts for a 61-percent reduction in mobile source emissions when taking into account the Project's specific

[93] *Fehr & Peers, 100 E. Ocean Boulevard Transportation Impact Analysis, January 2019. Refer to Appendix E.1 of this Draft EIR.*

characteristics, including the measures accounted for in the Traffic Study. As discussed below, the Project's mobile source GHG emissions inventory also takes into account CAPCOA measures which reduce VMT generated by the Project. CAPCOA has developed methodology to calculate the reduction in Project-generated VMT resulting from measures such as locating the Project near job centers, availability of mass transit stations, high density development, and improved pedestrian access. The measures included in both the Traffic Study and CAPCOA VMT reducing measures would result in a 61-percent reduction in mobile source GHG emissions. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

(d) Stationary Source Emissions

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated that the Project would include an emergency generator on-site. As shown in Table IV.C-5 on page IV.C-48, the Project scenario is expected to result in a total of 1 $MTCO_2e$ per year from stationary sources.

(e) Solid Waste Generation Emissions

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each proposed land use were selected for this analysis. As shown in Table IV.C-5, Project GHG emissions associated with solid waste generation would result in a total of 64 $MTCO_2e$ per year, which accounts for a 69-percent recycling/diversion rate consistent with the current diversion rate within the City of Long Beach.

(f) Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water, including: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used to treat the resulting wastewater and, in some areas, reuse it as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor to determine the embodied energy necessary to supply potable water.[94] The second step in calculating the water and wastewater-related GHG emissions is to multiply the amount of associated electricity consumed by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for SCE were selected in CalEEMod.

As shown in Table IV.C-5 on page IV.C-48, the Project is expected to result in 80 $MTCO_2e$, which would represent a reduction of approximately 18 percent in comparison to a Project without Reduction Measures.

(3) Combined Construction and Operational Impacts

As shown in Table IV.C-5, when taking into consideration implementation of the Project's GHG reducing measures provided throughout this Draft EIR, including the requirements set forth in the City of Long Beach Green Building Ordinance and the full implementation of current state mandates, the GHG emissions associated with the Project would equal 64 $MTCO_2e$ per year during construction and 4,220 $MTCO_2e$ per year during operation, for a combined total of 4,284 $MTCO_2e$ per year. The Project's emissions of 4,284 MTCO2e would be approximately 45 percent below the emissions that would be generated by the Project without implementation of GHG reducing features and strategies.

(4) Consistency with Applicable Plans and Policies

As described above, a significant impact would occur if the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment by conflicting with applicable regulatory plans and policies to reduce GHG emissions, as discussed within CARB's Scoping Plan and subsequent updates, SCAG's 2016–2040 RTP/SCS, and the City's Sustainable City Action Plan. The following section describes the extent to which the Project complies with or exceeds the performance-based standards outlined in these plans. As shown herein, the Project would be consistent with the applicable GHG reduction plans and policies.

(a) Climate Change Scoping Plan

As discussed above and as shown in Table IV.C-5, the Project would result in 4,284 $MTCO_2e$ annually. The breakdown of emissions by source category shows approximately less than 1 percent from area sources; 47 percent from energy consumption; 48 percent from mobile sources; less than 1 percent from stationary sources; 1.5 percent

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94 *The intensity factor reflects the average pounds of CO_2e per megawatt generated by a utility company.*

from solid waste generation; 2 percent from water supply, treatment, and distribution; and 1.5 percent from construction activities.

Table IV.C-6 on page IV.C-53 provides an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Project would be consistent with or exceed the reduction actions/strategies outlined in the 2008 Climate Change Scoping Plan and First Update.[95] As discussed therein, the Project would be consistent with the GHG reduction-related actions and strategies of these plans.

The 2017 Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the 2008 Climate Change Scoping Plan and First Update shown on Table IV.C-6. A summary of these policies and measures is provided in Table IV.C-7 on page IV.C-60. Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets.

Based on the analysis below, the Project would be consistent with the GHG reduction-related actions and strategies in the 2008 Climate Change Scoping Plan and subsequent updates, and related impacts regarding consistency with these plans would be less than significant.

(b) 2016–2040 RTP/SCS

As previously discussed, the purpose of SB 375 is to implement the State's GHG emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel. Under SB 375, the primary goal of the 2016–2040 RTP/SCS is to provide a framework for future growth that will decrease per capita GHG emissions from cars and light-duty trucks based on land use planning and transportation options. To accomplish this goal, the 2016–2040 RTP/SCS identifies various strategies to reduce per capita VMT.

The 2016–2040 RTP/SCS is expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita passenger vehicle GHG emissions of 9 percent by 2020 and 16 percent by 2035.[96] Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the

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[95] *CARB, 2014 Update, May 2014, p. 4.*

[96] *CARB, Regional Greenhouse Gas Emission Reduction Targets Pursuant to SB 375, Resolution 10-31.*

Table IV.C-6
Consistency Analysis—2008 Climate Change Scoping Plan and First Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Area Sources (Less than 1 percent of Project inventory)		
SCAQMD Rule 445 (Wood Burning Devices): Requires use of natural gas to power all cooking stoves and fireplaces.	SCAQMD	**Consistent.** The Project would not include wood burning devices or stoves. Accordingly, the Project would be consistent with this regulation.
Energy (47 percent of Project inventory)		
California RPS program: SB 2X modified California's RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016.	SCE	**Consistent.** SCE's commitment to achieve 35 percent renewables by 2020 would exceed the requirement under the RPS program of 33 percent renewables by 2020. In 2017, SCE indicated that 29 percent of its electricity came from renewable resources.[a] As SCE would provide electricity service to the Project Site, the Project would use electricity that is produced consistent with this performance based standard. Given SCE's progress towards meeting and exceeding the established targets as well as penalties for non-compliance, it is assumed SCE will comply with the requirements.
SB 350: SB 350**,** the Clean Energy and Pollution Reduction Act of 2015, increases the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030 and also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.[b]	State Energy Resources Conservation and Development Commission and SCE	**Consistent.** SCE is required to generate electricity that would increase renewable energy resources to 33 percent by 2020 and 50 percent by 2030. As SCE would provide electricity service to the Project Site, by 2030 the Project would use electricity consistent with the requirements of SB 350. As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation.
SB 1368: SB 1368 establishes the GHG Emissions Standard for Baseload Generation which prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined-cycle natural gas power plant.	State, CEC, and SCE	**Consistent.** SCE meets the requirements of SB 1368. As SCE would provide electricity service to the Project Site, the Project would use electricity that meets the requirements under SB 1368.

Table IV.C-6 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and First Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
CCR, Title 20: The 2016 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.	State and CEC	**Consistent.** The Appliance Efficiency Regulations apply to new appliances and lighting that are sold or offered for sale in California. The Project would be outfitted with appliances and lighting that comply with CEC standards. In addition, the Project would implement other sustainability features such as Energy Star appliances and efficient lighting, thus reducing overall energy usage compared to baseline conditions.
CCR Title 24, Building Standards Code: The 2016 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants.	State and CEC	**Consistent.** Consistent with regulatory requirements, the Project would comply with mandatory standards included in the CalGreen Code. The 2016 Title 24 standards are more efficient than the 2020 Projected Emissions under Business-as-Usual in the 2008 Scoping Plan. The standards offer builders better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. The Project would meet or exceed Title 24 energy efficiency requirements and implement other sustainability features, thus reducing overall energy usage compared to baseline conditions. Thus, the Project has incorporated energy efficiency standards that are substantially more effective than the measures identified in the 2008 Scoping Plan to reduce GHG emissions.
Energy Independence and Security Act of 2007 (EISA): EISA requires manufacturing for sale within the United States to phase out incandescent light bulbs between 2012 and 2014 resulting in approximately 25 percent greater efficiency for light bulbs and requires approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.	Federal/ Manufacturers	**Consistent.** EISA reduces the use (and thus availability) of incandescent light bulbs, including within the Project and, thus, reduces energy usage associated with lighting.
AB 1109: AB 1109, the Lighting Efficiency and Toxic Reduction Act, prohibits a person from manufacturing or selling general purpose lights that contain certain levels of hazardous substances in the State and requires the	State/ Manufacturers	**Consistent.** As with EISA, discussed above, the Project would meet the requirements under AB 1109 because it would incorporate energy efficient lighting and electricity consumption. Additionally, the Project would comply with local and state green building programs, as

Table IV.C-6 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and First Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
establishment of minimum energy efficiency standards for all general service incandescent lamps. The standards are structured to reduce average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018.[d]		discussed throughout this analysis.
Cap-and-Trade Program: The program establishes an overall limit on GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, and cement production). Facilities subject to the cap are able to trade permits to emit GHGs within the overall limit.	State	**Consistent.** As required by AB 32 and the 2008 Climate Change Scoping Plan, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. That said, the Project would benefit from this regulatory program in that the GHG emissions associated with the Project's electricity usage would indirectly be covered by the Cap-and-Trade Program. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.
Million Solar Roofs Program: The program is implemented through SB 1 (Murray, 2006), which provides up to $3.3 billion in financial incentives for the installation of residential, commercial and institutional solar PV programs.		**Not Applicable.** The Project would meet or exceed Title 24 energy efficiency requirements and incorporate energy-efficient design methods and technologies, such as high performance window glazing; undergrounding parking to reduce heat island effects; high-efficiency domestic heaters; and enhanced insulation to minimize solar heat gain. The Project is not currently anticipated to include solar roofing materials or photovoltaic cells; thus, the Project would not be eligible for the financial incentives offered by this program. However, Title 24 requires rooftop areas on high-rise non-residential buildings to set aside a minimum area for potential installation of solar panels at a later date. Thus, the Project would be considered "solar-ready."
Mobile Sources (48 percent of project inventory)		
AB 1493 "Pavley Standards": AB 1493 requires the development and adoption of regulations to achieve "the	State, CARB	**Consistent.** The Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and reduced

Table IV.C-6 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and First Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
maximum feasible reduction of greenhouse gases" emitted by non-commercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. In compliance with AB 1493, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles and light duty trucks of model year 2009 through 2016. Model years 2017 through 2025 are addressed by California's Advanced Clean Cars program (discussed below).		GHG emissions by about 30 percent in 2016, all while improving fuel efficiency. This regulatory program applies to vehicle manufacturers, not directly to land use development. Vehicular travel associated with the Project would benefit from this regulation in the form of reduced GHG emissions because vehicle trips would be affected by AB 1493. Mobile source emissions generated by Project tenants, employees, and visitors would be reduced with implementation of AB 1493, consistent with reduction of GHG emissions under AB 32. Mobile source GHG emissions were calculated using CalEEMod which includes implementation of AB 1493 into mobile source emission factors.
Low Carbon Fuel Standard: The LCFS requires a 10-percent or greater reduction by 2020 in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009 (CARB 2009).[e,f]	State, CARB	**Consistent.** This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with the Project would benefit from this regulation because fuel used by Project-related vehicles would be required to comply with the LCFS. Mobile source GHG emissions were calculated using CalEEMod which accounts for implementation of the LCFS in the mobile source emission factors.
Advanced Clean Cars Program: In 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.	State, CARB	**Consistent.** Similar to AB 1493, this regulatory program applies to manufacturers, not directly to land use development. Standards under the Advanced Clean Cars Program will apply to all passenger and light duty trucks used by customers, employees, and deliveries to the Project. GHG emissions generated by Project-related vehicular travel would benefit from this regulation, and mobile source emissions generated by the Project would be reduced with implementation of standards under the Advanced Clean Cars Program, consistent with reduction of GHG emissions under AB 32. Mobile source GHG emissions conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model does not yet account for this regulation.
SB 375: SB 375 requires integration of planning processes for transportation, land-use and housing. Under SB 375, each MPO would be required to adopt an SCS to encourage compact development that reduces	State, CARB Regional, SCAG	**Consistent.** SB 375 requires SCAG to direct the development of the SCS for the region, as discussed further below. The Project represents an infill development within an urbanized area that would concentrate new hotel/restaurant uses within a HQTA. Furthermore, the 2016–2040

Table IV.C-6 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and First Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions.		RTP/SCS would result in an estimated 18-percent decrease in per capita GHG emissions from passenger vehicles by 2035 and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040. As discussed above, CARB updated the SB 375 targets for the SCAG region, requiring a 19-percent decrease in VMT by 2035. Implementation of the 2016–2040 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals. The Project would result in a mobile GHG emissions reduction of approximately 61 percent (see Appendix B) and, therefore, the Project would be consistent with SB 375, the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS, and CARB's updated 2035 target.
Solid Waste (1.5 percent of project inventory)		
AB 939: AB 939, the California Integrated Waste Management Act of 1989, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; and (2) diversion of 50 percent of all solid waste on and after January 1, 2000, through source reduction, recycling, and composting facilities.[g] ***AB 341:*** AB 341 amended AB 939 to include a provision declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.[h]	State	**Consistent.** GHG emissions related to the Project's solid waste generation would benefit from this regulation as it would decrease the overall amount of solid waste disposed of at landfills. The decrease in solid waste would in turn decrease the amount of methane released from the decomposing solid waste. Project-related GHG emissions from solid waste generation include a 69-percent reduction in solid waste generation, consistent with the current diversion rate within the City of Long Beach (which is anticipated to increase over time in compliance with AB 341). The Applicant shall also only contract for waste disposal services with a company that recycles solid waste in compliance with AB 341. In addition, the Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material. Further, the Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of non-hazardous construction debris in accordance with SB 1374.

Table IV.C-6 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and First Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Water (2 percent of project inventory)		
CCR, Title 24, Building Standards Code: The CalGreen Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20-percent overall water use reduction.	State	**Consistent.** The Project would comply with applicable provisions of the CalGreen code (i.e., a 20-percent overall water use reduction). Water usage rates were calculated consistent with the requirements under City of Long Beach plumbing code requirements and reflects approximately a 20-percent reduction in water usage as compared to the base demand.
SB X7-7: SB X7-7, the Water Conservation Act of 2009, sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The State is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the *Climate Change Scoping Plan*. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.	State	**Consistent.** As discussed above under Title 24, the Project would incorporate water conservation features that would contribute towards meeting this performance based standard. Examples include: high-efficiency toilets and urinals and the use of proper hydro-zoning, turf minimization and zoned irrigation. The Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.
Construction (1.5 percent of Project inventory)		
CARB In-Use Off-Road Regulation: CARB's in-use off-road diesel vehicle regulation ("Off-Road Diesel Fleet Regulation") requires the owners of off-road diesel equipment fleets to meet fleet average emissions standards pursuant to an established compliance schedule.	CARB	**Consistent.** The Applicant would use construction contractors that comply with this regulation.
CARB In-Use On-Road Regulation: CARB's in-use on-road heavy-duty vehicle regulation ("Truck and Bus Regulation") applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.[i]	CARB	**Consistent.** The Applicant would use construction contractors that comply with this regulation.

Table IV.C-6 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and First Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis

[a] *California Energy Commission, SCE's 2017 Power Content Label.*

[b] *Senate Bill 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.*

[c] *CEC, Adoption Hearing, 2016 Building Energy Efficiency Standards.*

[d] *AB 1109 (2007–2008 Reg. Session) Stats. 2007, Ch. 534.*

[e] *CARB, Initial Statement of Reason for Proposed Regulation for The Management of High Global Warming Potential Refrigerant for Stationary Sources, October 23, 2009.*

[f] *Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "lifecycle" of a transportation fuel.*

[g] *PRC Section 41780(a).*

[h] *PRC Section 41780.01(a).*

[i] *CARB, Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation, www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm, page last reviewed by CARB on December 20,2018.*

Source: Eyestone Environmental, 2019.

Table IV.C-7
Consistency Analysis—2017 Update

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
SB 350: SB 350, the Clean Energy and Pollution Reduction Act of 2015, increases the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030.[a] Required measures include: • Increase RPS to 50 percent of retail sales by 2030. • Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030. • Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.	CPUC, CEC, CARB	**Consistent.** SCE is required to generate electricity that would increase renewable energy resources to 33 percent by 2020 and 50 percent by 2030. As SCE would provide electricity service to the Project Site, by 2030 the Project would use electricity consistent with the requirements of SB 350. As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (consistency with this regulation is discussed more specifically below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation.
Implement Mobile Source Strategy (Cleaner Technology and Fuels) • At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025. • At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030. • Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations.	CARB, CalSTA, SGC, Caltrans CEC, OPR, Local agencies	**Consistent.** CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025. Standards under the Advanced Clean Cars Program will apply to all passenger and light duty trucks used by customers, employees, and deliveries to the Project. The Program also requires auto manufacturers to produce an increasing number of zero emission vehicles in the 2018 through 2025 model years. Extension of the Advanced Clean Cars Program has not yet been adopted, but it is expected that measures will be introduced to increase GHG stringency on light duty autos and continue adding zero emission

Table IV.C-7 (Continued)
Consistency Analysis—2017 Update

• Medium- and heavy-duty GHG Phase 2. • Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard. • Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030. • Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		and plug in vehicles through 2030. CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.[b,c] GHG emissions generated by Project-related vehicular travel would benefit from this regulation, and mobile source emissions generated by the Project would be reduced with implementation of standards under the Advanced Clean Cars Program, consistent with reduction of GHG emissions under AB 32. Mobile source GHG emissions conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model does not yet account for this regulation. Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the Project would also benefit from these measures once adopted. SB 375 requires SCAG to direct the development of the SCS for the region, as discussed further below. The Project represents an infill development within an urbanized area that would concentrate new hotel/restaurant uses within a HQTA. Furthermore, the 2016–2040 RTP/SCS would result in an estimated 19-percent decrease in per capita GHG emissions from passenger vehicles by 2035 and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040. As discussed above, CARB updated the SB 375 targets for the SCAG region, requiring a 19-percent decrease in VMT by 2035. Implementation of the 2016–2040 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals. As discussed above, the Project results in a mobile GHG emissions reduction of approximately 61 percent and, therefore, the Project would be consistent with SB 375, the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS, and with CARB's updated

Table IV.C-7 (Continued)
Consistency Analysis—2017 Update

		2035 target.
Increase Stringency of SB 375 Sustainable Communities Strategy (2035 Targets)	CARB	**Consistent** Under SB 375, CARB sets regional targets for GHG emission reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each region. As required under SB 375, CARB is required to update regional GHG emissions targets every 8 years, which was last updated in March 2018. As part of the 2018 updates, CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the current reduction target of 13 percent for 2035. The Project would be consistent with SB 375 in terms of developing an infill project within an urbanized area. This would concentrate new hotel and restaurant uses within an HQTA. Project-related transportation emissions would be reduced by approximately 61 percent (see Appendix B) and, therefore, the Project would be consistent with SB 375 and the 2016–2040 RTP/SCS.
By 2019, adjust performance measures used to select and design transportation facilities. • Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans	**Consistent.** The Project would not involve construction of transportation facilities. However, the Project is located approximately 0.15 mile from the Downtown Long Beach Metro Blue Line Station. The Project would benefit from this station by facilitating the use of mass transit, thereby resulting in a reduction of Project-related vehicle trips to and from the site.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR/SGC, CARB	**Consistent.** The Project would support this policy since all parking would be valet only. The cost of parking would also be unbundled from the cost of the hotel rooms. Pricing policies would encourage use of alternative modes of transportation (low-GHG).
Implement California Sustainable Freight Action Plan: • Improve freight system efficiency. • Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	CARB	**Consistent.** The Project land uses would not include freight transportation or warehousing. Therefore, the Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.

Table IV.C-7 (Continued)
Consistency Analysis—2017 Update

Adopt a Low Carbon Fuel Standard with a CI reduction of 18 percent.	CARB	**Consistent.** This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with the Project would benefit from this regulation because fuel used by Project-related vehicles would be required to comply with LCFS. Mobile source GHG emissions were calculated using CalEEMod which includes implementation of the LCFS into mobile source emission factors. The current LCFS, adopted in 2007, requires a reduction of at least 10 percent in the carbon intensity (CI) of California's transportation fuels by 2020. On September 27, 2018, CARB approved an amendment to the LCFS regulation to require a 20 percent reduction in CI from a 2010 baseline by 2030.[d] Reductions in CI are phased in starting in 2019 with a reduction of 6.25 percent and increases by 1.25 percent each year. LCFS emissions reductions were calculated for the Project based on a 13.75 percent reduction in CI by 2025, the Project's build out year.
Implement the Short-Lived Climate Pollutant Strategy by 2030: • 40-percent reduction in methane and hydrofluorocarbon emissions below 2013 levels. • 50-percent reduction in black carbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, SWRCB, Local air districts	**Consistent.** SB 605 was adopted in 2014 which directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. SB 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels.[e] The Project would comply with the CARB SLCP Reduction Strategy which limits the use of hydrofluorocarbons for refrigeration uses.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA, SWRCB, Local air districts	**Consistent.** Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50-percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and 75-percent reduction by 2025. As of March 2018, CalRecycle is currently holding workshops to review draft regulatory language. Adoption of the regulations to achieve SB 1383 targets is expected in early 2019.[f] Adoption of the regulations to achieve SB 1383 targets is expected in early 2019.[e] The Project would be consistent with AB 341 which requires not less

Table IV.C-7 (Continued)
Consistency Analysis—2017 Update

		than 75 percent of solid waste generated to be source reduced through recycling, composting, or diversion. This reduction in solid waste generated by the Project would reduce overall GHG emissions. Compliance with AB 341 would also help achieve the goals of SB 1383.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB,	**Consistent.** The current Cap-and-Trade Program will end on December 31, 2020. AB 398 was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program from January 1, 2021 through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade Program to establish updated protocols and allocation of proceeds to reduce GHG emissions.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink: • Protect land from conversion through conservation easements and other incentives. • Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity • Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments • Establish scenario projections to serve as the foundation for the Implementation Plan	CNRA and departments within, CDFA, CalEPA, CARB	**Consistent.** This regulatory program applies to Natural and Working Lands and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	**Consistent.** This regulatory program applies to Natural and Working Lands and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.
Implement Forest Carbon Plan	CNRA, CAL FIRE, CalEPA	**Consistent.** This regulatory program applies to state and federal forest land and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Forest Carbon Plan.

Table IV.C-7 (Continued)
Consistency Analysis—2017 Update

Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	**Consistent.** Funding and financing mechanisms are the responsibility of the State and local agencies. The Project would not conflict with funding and financing mechanisms to support GHG reductions.

[a] *SB 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.*

[b] *CARB, Advance Clean Cars, Midterm Review, ww2.arb.ca.gov/resources/documents/2017-midterm-review-report, accessed June 19, 2019.*

[c] *CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), ww2.arb.ca.gov/our-work/programs/advanced-clean-truck, accessed June 19, 2019.*

[d] *CARB, Amendments to the Low Carb Fuel Standard Regulation and to the Regulation on Commercialization of Alternative Diesel Fuels, November 2018.*

[e] *CARB, Reducing Short-Lived Climate Pollutants in California, www.arb.ca.gov/cc/shortlived/shortlived.htm, last reviewed by CARB November 21, 2018.*

[f] *CalRecycle, Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions, www.calrecycle.ca.gov/climate/slcp/, last updated April 16, 2019.*

Source: Eyestone Environmental, 2019.

2016–2040 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.[97] The 2016–2040 RTP/SCS would result in an estimated 8-percent decrease in per capita passenger vehicle GHG emissions by 2020, an 18-percent decrease in per capita passenger vehicle GHG emissions by 2035, and a 21-percent decrease in per capita passenger vehicle GHG emissions by 2040.[98] By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an approximately 21-percent decrease in per capita passenger vehicle GHG emissions by 2040 (an additional 3-percent reduction in the five years between 2035 [19 percent] and 2040 [21 percent]), the 2016–2040 RTP/SCS is expected to fulfill and exceed the SCAG region's portion of SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

In March 2018, CARB updated the SB 375 targets to require an 8-percent reduction by 2020 and a 19-percent decrease in VMT for the SCAG region by 2035.[99] As these reduction targets were updated after the 2016–2040 RTP/SCS was published, it is expected that the next iteration of the RTP/SCS will be updated to include these targets. Accordingly, the 2016–2040 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016–2040 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2016–2040 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use.

With regard to individual developments, such as the Project, the strategies and policies set forth in the 2016–2040 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency. The Project's consistency with these general categories of strategies and policies are each discussed below.

[97] *SCAG, 2016–2040 RTP/SCS, April 2016, p. 153.*

[98] *SCAG, 2016–2040 RTP/SCS, April 2016, p. 8.*

[99] *CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets (2018).*

(i) Consistency with Integrated Growth Forecast

The 2016–2040 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. According to the 2016–2040 RTP/SCS, the employment forecast for the City of Long Beach Subregion in 2018 is approximately 174,448 employees.[100] In 2022, the projected occupancy year of the Project, the City of Long Beach Subregion is anticipated to have approximately 176,917 employees.[101] Thus, the Project's estimated 588 net new employees would constitute approximately 0.3 percent of the Subregion's employment forecasted in 2022.[102] Accordingly, the Project's employment generation would be consistent with the employment projections contained in the 2016–2040 RTP/SCS.

(ii) Consistency with VMT Reduction Strategies and Policies

As previously discussed and detailed in Appendix B of the Draft EIR, the Project's design includes characteristics that would reduce trips and VMT within the Air Basin as compared to the Project without implementation of VMT reducing measures as measured by CalEEMod. These relative reductions in vehicle trips and VMT help quantify the GHG emissions reductions achieved by locating the Project in an infill area and HQTA that promotes alternative modes of transportation. Specifically, the Project characteristics listed below are consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*, which identifies the VMT and vehicle trips reductions for the Project Site relative to the standard trip and VMT rates in CalEEMod and which corresponds to a reduction in relative GHG emissions.[103] Measures applicable to the Project include the following; a brief description of the Project's relevance to the measure is also provided:

- **CAPCOA Measure LUT-1—Increase Density:** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies, such as enhanced transit services. The Project would increase the site density from 0 jobs per acre to approximately 440 jobs per acre.

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[100] *Based on a linear interpolation of 2012–2040 data.*

[101] *Based on a linear interpolation of 2012–2040 data.*

[102] *Long Beach Unified School District, Commercial/Industrial Development School Fee Justification Study, March 7, 2018, Table 4.*

[103] *CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, 2010.*

- **CAPCOA Measure LUT-4—Increase Destination Accessibility:** The Project Site is located in Downtown Long Beach. Access to the Downtown Long Beach employment center would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reductions in transportation-related emissions as a result of the Project.

- **CAPCOA Measure LUT-5—Increase Transit Accessibility:** The Project would be located within 0.15 mile of the Metro Blue Line Downtown Long Beach station. The Project would also provide adequate bicycle parking spaces for guest and commercial uses to encourage utilization of alternative modes of transportation.

- **CAPCOA Measure SDT-1—Provide Pedestrian Network Improvements:** The Project would provide pedestrian access that minimizes barriers and links the Project Site with existing or planned external streets to encourage people to walk instead of drive. The Project would provide direct access to the existing off-site pedestrian network including existing off-site sidewalks, to encourage and increase pedestrian activities in the area, which would further reduce VMT and associated transportation-related emissions.

- **CAPCOA Measure SDT-2—Traffic Calming Measures:** The Project would provide traffic calming measures to encourage people to walk or bike instead of using a vehicle, including the introduction of several signalized intersections. This mode shift results in a decrease in VMT. Over 75 percent of streets within 0.5 mile of the Project Site include sidewalks with crosswalks.

As shown in Appendix B, the Project would result in an approximately 61-percent reduction in GHG emissions from mobile sources and would therefore be consistent with the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS. This reduction is attributable to the Project characteristics of being an infill project near transit that supports multi-modal transportation options.

The Project would also be consistent with the following key GHG reduction strategies in SCAG's 2016–2040 RTP/SCS, which are based on changing the region's land use and travel patterns:

- Compact growth in areas accessible to transit;

- Jobs closer to transit;

- Job growth focused in HQTAs; and

- Biking and walking infrastructure to improve active transportation options and transit access.

The Project represents an infill development within an urbanized area that would concentrate new hotel and restaurant uses within an HQTA, which is defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. In the Project vicinity, the Metro Blue Line Downtown Long Beach station is located approximately 0.15 miles from the Project Site. Public bus transit service in the vicinity of the Project Site is provided by Metro and Long Beach Transit, with 11 bus lines serving the area. The Project would also provide bicycle storage areas for hotel guests and visitors, and the existing Long Beach Bike Share station located on-site would remain. The Project would thus provide hotel guests and visitors with convenient access to public transit and opportunities for walking and biking, which would facilitate a reduction in VMT and related vehicular GHG emissions, which would be consistent with the goals of SCAG's 2016–2040 RTP/SCS.

(iii) Increased Use of Alternative Fueled Vehicles Policy Initiative

The second goal of the 2016–2040 RTP/SCS, with regard to individual development projects such as the Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. This 2016–2040 RTP/SCS policy initiative focuses on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. The Project would implement a TDM Program which would include strategies to promote non-auto travel and reduce the use of single-occupant vehicle trips. Such TDM measures would include providing for bicycle parking, showers and lockers; rideshare parking spaces; wider sidewalks and lighting to encourage walking; and the display of information (signage) to promote the use of alternative transportation. Therefore, the Project would be consistent with the 2016–2040 RTP/SCS.

(iv) Energy Efficiency Strategies and Policies

The third important focus within the 2016–2040 RTP/SCS for individual developments such as the Project involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2016–2040 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. The Project's building design would incorporate a number of sustainability features capable of LEED Silver® certification, including energy efficiency measures that meet or exceed Title 24 energy efficiency requirements, installation of efficient HVAC mechanical systems, use of LED lighting or other energy-efficient lighting technologies, etc., thus reducing overall energy usage compared to baseline conditions. Projects pursuing LEED® certification must earn points by implementing sustainability measures such as reducing energy and water usage, reducing waste, increasing recycling, and providing indoor environmental comfort. As LEED® certification is based on a point system, multiple paths may be taken to achieve Silver® certification. At this time, it is not known which points will be selected to achieve

LEED Silver®, but Project energy usage will meet or exceed Title 24 energy efficiency requirements. Accordingly, the Project would be consistent with the 2016–2040 RTP/SCS energy efficiency strategies and policies.

In sum, the Project is the type of land use development that is encouraged by the RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies.[104] By furthering implementation of SB 375, the Project would support regional land use and transportation GHG reductions consistent with state regulatory requirements.

Therefore, the Project would be consistent with the GHG reduction-related actions and strategies contained in the 2016–2040 RTP/SCS. Overall, the Project would not conflict with the 2016–2040 RTP/SCS, which is intended to reduce GHG emissions.

(c) Sustainable City Action Plan

The Project would be consistent with the City of Long Beach Sustainable City Action Plan. The plan is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. The Sustainable City Action Plan includes measurable goals and actions that are intended to be challenging, yet realistic. Table IV.C-8 on page IV.C-71 provides a discussion of the Project's consistency with applicable GHG-reducing actions from the Sustainable City Action Plan. As discussed therein, the Project would be consistent with the applicable goals and actions of the Sustainable City Action Plan.

(d) Conclusion

As analyzed above, the Project would be consistent with the emission reduction measures discussed within CARB's 2008 Climate Change Scoping Plan and subsequent updates, particularly their emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. In addition, as recommended by CARB's 2008 Climate Change Scoping Plan and subsequent updates, the Project would incorporate "green building" features consistent with the CalGreen Building Code.

As part of SCAG's 2016–2040 RTP/SCS, a reduction in VMT within the region is a key component to achieve the 2020 and 2035 GHG emission reduction targets established by CARB. As discussed above, the Project would result in a VMT reduction of

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[104] *As discussed above, SB 375 legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32.*

Table IV.C-8
Consistency with Applicable GHG Emissions Goals and Actions of the Sustainable City Action Plan

Action		Goal	Consistency Analysis
Focus Area: Buildings & Neighborhoods			
Initiative 1	Accelerate the use of green building techniques in new development, renovations, and retrofits to improve building efficiency and health.	At least 5 million square feet of privately developed LEED® certified (or equivalent) green buildings by 2020.	**Consistent.** Development of the Project would support this goal by meeting the U.S. Green Building Council's LEED® program at the Silver® level. As previously discussed, sustainability features would include energy conservation, water conservation, and waste reduction features.
Initiative 3	Reduce electricity and natural gas consumption of the Long Beach community.	By 2020 reduce community electricity use by 15 percent and natural gas by 10 percent.	**Consistent.** The Project would have a combined electricity and natural gas reduction of 10 percent due to consistency with mandatory requirements for achieving LEED Silver®.
Focus Area: Transportation			
Initiative 1	Reduce emissions and improve air quality by moving toward more fuel efficient and alternative fuel vehicles.	Reduce vehicle emissions by 30 percent by 2020.	**Consistent.** As discussed above, several regulations from the 2008 Climate Change Scoping Plan would serve to reduce vehicle emissions. Specifically, with implementation of the Advanced Clean Cars Program, new automobiles will emit 34 percent less global warming gases and 75 percent less smog-forming emissions. Furthermore, the Project characteristics described above would reduce VMT by 67 percent, with a corresponding reduction in emissions.
Focus Area: Waste Reduction			
Initiative 1	Increase diversion by reducing waste and increasing recycling and reuse.	Annual reduction in average pounds of solid waste generated per person per day.	**Consistent.** The Project would comply with this action by providing on-site, source-sorted receptacles to facilitate recycling.
Focus Area: Water Reduction			
Initiative 1	Ensure a sustainable water supply through conservation and reduced dependence on imported water.	Reduce per capita use of potable water, exceeding the state mandate to achieve a demand reduction of 20 percent in per capita water use by the year 2020.	**Consistent.** As required by CalGreen Building Code, the Project would have an indoor and outdoor water use reduction of 20 percent, consistent with the state mandate to achieve a demand reduction of 20 percent.

Source: Eyestone Environmental, 2019.

approximately 67 percent as a result of various site characteristics, including the close proximity to transit, consistent with SCAG's 2016–2040 RTP/SCS. Thus, given the

Project's consistency with state, SCAG, and City of Long Beach GHG emission reduction goals and objectives, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. In the absence of adopted standards and established significance thresholds, and given this regulatory consistency, it is concluded that the Project's impacts with respect to GHG emissions would be less than significant and would not be cumulatively considerable.

(5) Post-2030 Analysis

Recent studies show that the State's existing and proposed regulatory framework will put California on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[105] Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which requires the state board to ensure statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. As discussed above, the new plan outlined in SB 32 involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The Project's design features would advance these goals by reducing VMT, increasing the use of electric vehicles, improving energy efficiency, and reducing water usage.

The emissions modeling in the 2017 Update has projected 2030 statewide emissions which take into account known commitments (reduction measures) such as SB 375, SB 350, and other measures. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments will not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Update assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project would be consistent with the 2017 Update, additional measures to achieve the 2030 targets and beyond are outside of the City or the Project's control. Therefore, any quantified evaluation of post-2030 Project emissions would be speculative. Regardless, the discussion herein is provided for information purposes.

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[105] *CARB, 2017 Update, November 2017, p. 18.*

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. Nonetheless, studies have shown that in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." In the First Update, however, CARB generally described the type of activities required to achieve the 2050 target as "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately."[106]

Although the Project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the Project's emissions level (4,284 metric tons of CO_2e per year) to decline as the regulatory initiatives identified by CARB in the First Update are implemented and as other technological innovations occur. Stated differently, the Project's total emissions at build out presented in Table IV.C-5 on page IV.C-48 represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project would be consistent with the Executive Order's horizon-year (2050) goal. Further, the Project's consistency with SCAG's RTP/SCS demonstrates that the Project would be consistent with post-2030 GHG reduction goals. The 2016–2040 RTP/SCS would result in an estimated 8-percent decrease in per capita passenger vehicle GHG emissions by 2020, a 18-percent decrease in per capita passenger vehicle GHG emissions by 2035, and a 21-percent decrease in per capita passenger vehicle GHG emissions by 2040. In March 2018, CARB adopted updated targets requiring a 19-percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016–2040 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. Thus, the 2016–2040 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

The Project is the type of land use development that is encouraged by the 2016–2040 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors

[106] *CARB, 2017 Update, November 2017, p. 18.*

required by SB 375, which, in turn, advances the State's long-term climate policies. The Project would result in a VMT reduction of approximately 67 percent in comparison to a Project without Reduction Measures as estimated by CalEEMod and a 61-percent reduction in GHG emissions from mobile sources, which would be consistent with the reduction in transportation emissions per capita provided in the 2016–2040 RTP/SCS and the updated SB 375 targets. By furthering implementation of SB 375, the Project would support regional land use and transportation GHG reductions consistent with state climate targets for 2020 and beyond.

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

4. Cumulative Impacts

As previously explained, the analysis of a project's GHG emissions is inherently cumulative in nature because climate change is a global problem and the emissions from any single project are typically negligible. Accordingly, the analysis above takes into account the potential for the Project to contribute to the cumulative impact of global climate change. Table IV.C-5 on page IV.C-48 illustrates that implementation of the Project's design, sustainability, site, and land use characteristics, combined with compliance with regulatory requirements, including state mandates, would contribute to suitable GHG reductions. Although the Project's net GHG emissions would be greater than the 2008 draft screening level from the SCAQMD, the Project's emissions profile would be consistent the State's goals. The analysis shows that the Project would consistent with CARB's 2008 Climate Change Scoping Plan and subsequent updates, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. The analysis also shows that the Project would be consistent with the 2016–2040 RTP/SCS plans, policies, and regulatory requirements to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. In addition, the Project would comply with the City of Long Beach Sustainable City Action Plan, which is intended to guide operational, policy, and financial decisions to create a more sustainable Long Beach. Given the Project's consistency with statewide, regional, and local plans adopted for the reduction of GHG emissions, it is concluded that the Project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable. For these reasons, the Project's cumulative contribution to global climate change would be less than significant.

5. Mitigation Measures

With implementation of the Project's design, sustainability, site, and land use characteristics, combined with compliance with regulatory requirements, including those discussed above, impacts related to GHG emissions would be less than significant.

6. Level of Significance After Mitigation

Project impacts related to GHG emissions would be less than significant.

IV. Environmental Impact Analysis
D. Noise

1. Introduction

This section of the Draft EIR analyzes the potential noise and vibration impacts associated with the Project. Specifically, the analysis describes the existing noise environment within the Project area, estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the Project, identifies the potential for significant impacts, and provides mitigation measures to address any significant impacts. In addition, evaluation of the potential cumulative noise and vibration impacts resulting from the Project together with related projects and future growth are also provided. Noise calculation worksheets are included in Appendix D of this Draft EIR.

2. Environmental Setting

a. Noise and Vibration Fundamentals

(1) Noise

(a) Fundamentals of Sound and Environmental Noise

Noise is commonly defined as sound that is undesirable because it interferes with speech communication and hearing, causes sleep disturbance, or is otherwise annoying (unwanted sound). The decibel (dB) is a conventional unit for measuring the amplitude of sound as it accounts for the large variations in sound pressure amplitude and reflects the way people perceive changes in sound amplitude.[1] Human hearing is not equally sensitive to sound at all frequencies. Therefore, to approximate this human frequency-dependent response, the A-weighted filtering system is used to adjust measured sound levels (as measured in A-weighted decibels or dBA). The term “A-weighted” refers to filtering the noise signal in a manner that corresponds to the way the human ear perceives sound. Examples of various sound levels in different environments are shown in Table IV.D-1 on page IV.D-2.

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[1] *All sound levels measured in decibel (dB) in this study are relative to 2x10^{-5} newtons per square meter (N/m^{2}).*

Table IV.D-1
Typical Noise Levels

Common Outdoor Activities	Noise Levels (dBA)	Common Indoor Activities
	110	Rock Band
Jet Fly-Over at 1000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
Gas Lawn Mower at 100 feet	**70**	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	**60**	
		Large Business Office
Quiet Urban Daytime	**50**	Dishwasher Next Room
Quiet Urban Nighttime	**40**	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
	0	

Source: Caltrans, Technical Noise Supplement, Table 2-5, 2009.

People commonly judge the relative magnitude of sound sensation using subjective terms such as “loudness” or “noisiness.” A change in sound level of 3 dB is considered “just perceptible,” a change in sound level of 5 dB is considered “clearly noticeable,” and a change (increase) of 10 dB is typically recognized as “twice as loud.”[2]

(b) Outdoor Sound Propagation

In an outdoor environment, sound energy attenuates through the air as a function of distance. Such attenuation is called “distance loss” or “geometric spreading,” and is based on the type of source configuration (i.e., a point source or a line source). The rate of sound attenuation for a point source, such as a piece of mechanical or electrical equipment (e.g.,

2 *Bies & Hansen, Engineering Noise Control, 1988, Table 2.1.*

air conditioner or bull dozer), is 6 dBA per doubling of distance from the noise source to the receptor at acoustically "hard" sites and at a rate of 7.5 dBA at acoustically "soft" sites.[3] For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of 50 feet from a point source at an acoustically hard site would attenuate to 54 dBA at a distance of 100 feet from the point source and attenuate to 48 dBA at 200 feet from the point source. The rate of sound attenuation for a line source, such as a constant flow of traffic on a roadway, is 3 dBA and 4.5 dBA per doubling of distance from the noise source to the receptor for hard and soft sites, respectively.[4]

In addition, structures (e.g., buildings and solid walls) and natural topography (e.g., hills and berms) that obstruct the line of sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., the line of sight is not fully blocked), some barrier insertion loss would still occur, but to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line of sight between the source and receiver) to an upper range of 20 dBA with a more substantial barrier.[5] Additionally, structures with closed windows can further attenuate exterior noise by a minimum of 25 dBA to 30 dBA.[6]

(c) Environmental Noise Descriptors

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise is dependent upon the total acoustical energy content, as well as the time and duration of occurrence. The most frequently used noise descriptors, including those used by the City of Long Beach (City), are summarized below:

Equivalent Sound Level (L_{eq})—L_{eq} is a measurement of the acoustic energy content of noise averaged over a specified time period. Thus, the L_{eq} of a time-varying sound and that of a steady sound are the same if they deliver the same amount of energy to the

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3 *Caltrans, Technical Noise Supplement, 2009.*

4 *Caltrans, Technical Noise Supplement, 2009.*

5 *Caltrans, Technical Noise Supplement, 2009.*

6 *Federal Highway Administration (FHWA), Highway Traffic Noise Analysis and Abatement Policy and Guidance, 1995.*

receptor's ear during exposure. L_{eq} for 1-hour periods, during the daytime or nighttime hours, and 24-hour periods are commonly used in environmental assessments. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during day or night.

Maximum Sound Level (L_{max})—L_{max} represents the maximum sound level measured during a measurement period.

Statistical Sound Level (L_n). L_n is a statistical description of the sound level that is exceeded over some fraction of a given period of time. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. L_{90} noise level represents the noise level that is exceeded 90 percent of the time and, for environmental noise, is representative of the background ambient noise level.

Community Noise Equivalent Level (CNEL)—CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10 dBA adjustment (upward) added to the sound levels that occur between the hours of 10:00 P.M. and 7:00 A.M. (nighttime), and a 5 dBA adjustment (upward) added to the sound levels that occur between the hours of 7:00 P.M. and 10:00 P.M. (evening). These penalties are intended to account for increased human sensitivity to noise during the nighttime and evening periods, particularly where sleep is the most probable activity. CNEL has been adopted by the State of California to define the community noise environment for development of the community noise element of a General Plan and is also used by the City for land use planning purposes.[7]

Day/Night Average Sound Level (L_{dn})—L_{dn} is the time average of all A-weighted sound levels for a 24-hour period, similar to the CNEL. L_{dn} includes a 10 dBA adjustment (upward) added to the sound levels that occur between the hours of 10:00 P.M. and 7:00 A.M. (nighttime). Unlike CNEL, L_{dn} does not include the 5 dBA adjustment (upward) to the sound levels that occur between the hours of 7:00 P.M. and 10:00 P.M. (evening). L_{dn} is typically within one dBA of CNEL, and the two measurements are often used interchangeably for the purposes of defining the community noise environment and measuring A-weighted sound levels for a 24-hour period.

(2) Ground-Borne Vibration

Vibration is commonly defined as an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or

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[7] *State of California, General Plan Guidelines, 2003.*

acceleration. The peak particle velocity (PPV) or the root-mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal and is typically used for evaluating potential building damage.[8] The RMS velocity is defined as the square-root of the average of the squared amplitude of the vibration signal and is typically more suitable for evaluating human response to ground-borne vibration.[9] The RMS vibration velocity level can be presented in inch per second or in velocity level in decibel (VdB, a decibel unit referenced to 1 micro-inch per second).[10] Ground-borne vibration generated by human-made activities (e.g., road traffic, construction operations) typically weakens with greater horizontal distance away from the source of the vibration.

b. Regulatory Framework

Various government agencies have established noise regulations and policies to protect citizens from potential hearing damage and other adverse effects associated with noise and ground-borne vibration. The City of Long Beach has adopted a number of regulations and policies, which are based in part on federal and state regulations and are intended to control, minimize, or mitigate environmental noise effects. In addition, the ground-borne vibration standards and guidelines from the Federal Transit Administration (FTA) are used for this analysis as a supplement to the City's vibration standards. The regulations and policies that are relevant to Project construction and operational noise are discussed below.

(1) Federal

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, the USEPA issued guidance levels for the protection of public health and welfare in residential land use

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[8] *Vibration levels used in this study are described in terms of peak particle velocity, measured in the unit of inches per second.*

[9] *Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, Section 7.1.2, May 2006.*

[10] *VdB (velocity level in decibel) = 20 x Log (V / V_{ref}), where V is the RMS velocity amplitude in micro-inch per second and V_{ref} is the reference velocity amplitude of 1×10^{-6} inch per second (1 micro-inch per second). All vibration levels described in decibel (VdB) in this study are RMS and referenced to 1 micro-inch per second.*

areas[11] of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA. These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project.

(2) State

The State of California has adopted noise compatibility guidelines for general land use planning. The types of land uses addressed by the State and the acceptable noise categories for each land use are included in the *State of California General Plan Guidelines,* which is published and updated by the Governor's Office of Planning and Research. The level of acceptability of the noise environment is dependent upon the activity associated with the particular land use. Table IV.D-2 on page IV.D-7 provides the guidelines for noise compatibility by land use. For example, according to the State, an exterior noise environment up to 65 dBA CNEL is "normally acceptable" for single- and multi-family residential uses, without special noise insulation requirements. In addition, noise levels up to 75 dBA CNEL are "conditionally acceptable" with special noise insulation requirements, while noise levels at 75 dBA CNEL and above are "clearly unacceptable" for residential and hotel uses.[12] In addition, the 2016 California Green Building Standards Code (CalGreen Code), which became effective January 1, 2017, requires that where the ambient noise environment exceeds 65 dBA CNEL or 65 dBA L_{eq}, measures should be implemented to achieve an interior noise environment not to exceed 50 dBA $L_{eq\ (1\text{-hour})}$.

(3) City of Long Beach

The Noise Element of the City of Long Beach General Plan (General Plan) establishes CNEL guidelines for land use compatibility and includes a number of goals, objectives, and policies for land use planning purposes. The City also has regulations to control unnecessary, excessive, and annoying noise, as cited in Long Beach Municipal Code (LBMC) Chapter 8.80—Noise. These regulations are described further below.

(a) City of Long Beach General Plan Noise Element

The City of Long Beach regulates noise and vibration based largely on the Noise Element of the General Plan and the criteria presented in the Municipal Code Noise Ordinance. The Noise Element, adopted in 1975, serves as a comprehensive program for

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11 USEPA, EPA Identifies Noise Levels Affecting Health and Welfare, April 1974, https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html, accessed June 19, 2019.

12 State of California, General Plan Guidelines, October 2003, p. 250.

Table IV.D-2
Land Use Compatibility for Community Noise Exposure

Land Use	Community Exposure Level, CNEL (dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential: Low-Density Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	Above 75
Residential: Multi-Family	50–65	60–70	70–75	Above 75
Transient Lodging: Motels, Hotels	50–65	60–70	70–80	Above 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50–75	—	Above 70
Playgrounds, Neighborhood Parks	50–70	—	67.5–75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	—	70–80	Above 80
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	> 75	—
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	> 75	—

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: State of California, General Plan Guidelines, Appendix C: Noise Element Guidelines, Figure 2, p. 250, October 2003.

noise control and abatement in Long Beach and includes an action program consisting of various measures that the City may implement in pursuing its noise control plan. The

Noise Element establishes noise control goals and polices, identifies potential noise problem areas, and outlines an ordinance for the control and abatement of noise. The City is currently updating the General Plan Noise Element.

(b) City of Long Beach Noise Regulations

LBMC Chapter 8.80 establishes acceptable ambient sound levels to regulate intrusive noises (e.g., stationary mechanical equipment and vehicles other than those traveling on public streets) within specific districts (land use zones) and provides procedures and criteria for the measurement of the sound level of noise sources. The LBMC provides exterior noise limits for five districts. These noise districts are:

1. District One—includes predominantly residential uses with other land use types also present.
2. District Two—includes predominantly commercial uses with other land use types also present.
3. Districts Three and Four—include predominantly industrial uses with other land use types also present.
4. District Five—includes airports, freeways and waterways that are regulated by other agencies.

For District 2, which includes the Project Site, the LBMC states that exterior operational noise levels as measured from another property shall not exceed 60 dBA during day time hours (7:00 A.M.–10:00 P.M.) and 55 dBA during night time hours (10:00 P.M.–7:00 A.M. To account for people's increased tolerance for short-duration noise events, the LBMC also provides allowances for noise limits as follows:

1. Standard 1: The noise standard for the land use district for noise sources occurring more than 30 minutes in any 1-hour period; or
2. Standard 2: The noise standard plus 5 dBA for noise sources occurring more than 15 minutes but less than 30 minutes in any 1-hour period; or
3. Standard 3: The noise standard plus 10 dBA for noise sources occurring more than 5 minutes but less than 15 minutes in any 1-hour period; or
4. Standard 4: The noise standard plus 15 dBA for noise sources occurring more than 1 minute but less than 5 minutes in any 1-hour period; or

5. Standard 5: The noise standard plus 20 dBA or the maximum measured ambient, for any period of time.

In accordance with the LBMC, if the existing measured ambient level exceeds the permissible level within any of the first four noise standard categories (Standards 1 through 4), the allowable noise exposure standard shall be increased in 5-decibel increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category (Standard 5), the maximum allowable noise level shall be the measured ambient noise level.[13] Furthermore, the LBMC provides a reduction of 5 dBA for steady high-pitched noise or repeated impulsive noises.[14]

LBMC Section 8.80.200, Noise Disturbances—Prohibited, lists a number of activities that are considered to be noise disturbances by the City. Specific activities prohibited by the LBMC include operating amplified sound systems between the hours of 10 P.M. and 7 A.M., loading and unloading between the hours of 10 P.M. and 7 A.M., and operating air conditioning or air refrigerating equipment that exceeds 55 dBA at any point on a neighboring property line.

LBMC Section 8.80.202, Construction Activity—Noise Regulations, applies to construction activities where a building or other related permit is required and issued by the Building Official and shall not apply to construction within the harbor district as established by the City Charter. This section of the LBMC includes the following restrictions:

- Weekdays and federal holidays: No person shall operate any tool or equipment used for construction, which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 P.M. and 7:00 A.M. of the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this section, federal holidays shall be considered weekdays.

- Saturdays: No person shall operate any tool or equipment used for construction, which produces loud or unusual noise that annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 P.M. on Friday and 9:00 A.M. on Saturday and after 6:00 P.M. on Saturday, except for emergency work authorized by the Building Official.

- Sundays: No person shall operate any tool or equipment used for construction at any time on Sunday, except for emergency work authorized by the Building

[13] *LBMC, Section 8.80.150.*

[14] *LBMC, Section 8.80.160.*

Official or except for work authorized by permit issued by the Noise Control Officer.

(3) Ground-Borne Vibration

LBMC Section 8.80.200 prohibits the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way. The perception threshold as defined by the LBMC is 0.001 g's (gravity) in the frequency range of 0–30 hertz (Hz) and 0.003 g's in the frequency range of 30–100 Hz.[15]

In addition, the FTA has published a technical manual titled "Transit Noise and Vibration Impacts Assessment," which provides ground-borne vibration impact criteria with respect to building damage during construction activities.[16] As discussed above, building vibration damage is measured in PPV described in the unit of inches per second. Table IV.D-3 on page IV.D-11 provides the FTA vibration criteria applicable to construction activities. According to FTA guidelines, a vibration criterion of 0.20 PPV should be considered as the significant impact level for non-engineered timber and masonry buildings. Structures or buildings constructed of reinforced concrete, steel, or timber, have a vibration damage criterion of 0.50 PPV pursuant to the FTA guidelines.

Tthe FTA guidance manual also provides vibration criteria for human annoyance for various uses. These criteria were established primarily for rapid transit (rail) projects and, as indicated in Table IV.D-4 on page IV.D-12, are based on the frequency of vibration events. Specific criteria are provided for three land use categories: (1) Vibration Category 1—High Sensitivity; (2) Vibration Category 2—Residential; and (3) Vibration Category 3—Institutional.

c. Existing Conditions

The Project Site is located in a highly urbanized area of the City and is surrounded by retail and commercial uses. Ambient noise includes traffic, transit, and trucks, commercial activities, surface parking lot activities, construction noise from developing properties in the area, and other miscellaneous noise sources associated with typical urban

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[15] *One "g" is the acceleration due to gravity at the Earth's surface, approximately 9.8 meters per second squared.*

[16] *FTA, Transit Noise and Vibration Impact Assessment, May 2006*

Table IV.D-3
Federal Transit Administration Construction Vibration Impact Criteria for Building Damage

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Source: FTA, Transit Noise and Vibration Impact Assessment, 2006.

activities. Within the Project Site, specific noise sources include vehicle movements associated with the use of existing surface parking lot.

(1) Existing Noise Levels

Some land uses are considered more sensitive to intrusive noise than others based on the types of activities typically involved at the receptor location. Typically noise sensitive uses include residences, transient lodgings, schools, libraries, churches, hospitals, and auditoriums. Based on a review of the land uses in the Project area, the nearest noise sensitive use is the Renaissance Hotel located north of the Project Site, across Ocean Boulevard (Receptor R2). Residential uses are located approximately 450 feet west of the Project Site on Seaside way (Receptor R1).

To establish baseline noise conditions, existing ambient noise levels were monitored at a total of five representative noise receptor locations in the vicinity of the Project Site, including an on-site location along the Project Site's western boundary. The five noise measurement locations are shown on Figure IV.D-1 on page IV.D-13 and described in Table IV.D-5 on page IV.D-14. The baseline noise monitoring measurements were conducted on June 14 and 15, 2018, using a Casella CEL-633 Type 1 Sound Level Meter.[17] Two 15-minute measurements were conducted at each of the receptor locations during daytime and nighttime hours. The daytime ambient noise levels were taken between the 10:00 A.M. and 1:00 P.M., and the nighttime ambient noise levels were taken between 10:00 P.M. and 12:00 A.M.

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[17] *This sound meter meets and exceeds the minimum industry standard performance requirements for "Type 1" standard instruments as defined in the American National Standard Institute (ANSI) S1.4. It also meets the requirement specified in Section 8.80.020 of the LBMC that instruments be "Type S2A" standard instruments or better. The sound meter was calibrated and operated according to the manufacturer's written specifications.*

Table IV.D-4
Federal Transit Administration Vibration Impact Criteria for Human Annoyance

Land Use Category	Ground-Borne Vibration Impacts Levels, VdB		
	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Category 1: Building where vibration would interfere with interior operations	65[d]	65[d]	65[d]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

[a] *"Frequent Events" are defined as more than 70 vibration events of the same source per day.*
[b] *"Occasional Events" are defined as between 30 and 70 vibration events of the same source per day.*
[c] *"Infrequent Events" are defined as fewer than 30 vibration events of the same source per day.*
[d] *This criterion limit is based on the levels that are acceptable for most moderately sensitive equipment such as optical microscopes.*
Source: FTA, Transit Noise and Vibration Impact Assessment, 2006.

Table IV.D-6 on page IV.D-15 provides a summary of the ambient noise measurements taken at the five receptor locations. Based on field observations, the ambient noise at the measurement locations is dominated by local traffic and pedestrians. As indicated in Table IV.D-6, the existing daytime ambient noise levels at the off-site locations ranged from 60.4 dBA (L_{eq}) at Receptor R4 to 70.6 dBA (L_{eq}) at Receptor R2, while the measured nighttime ambient noise levels ranged from 59.9 dBA (L_{eq}) at Receptor R4 to 70.0 dBA (L_{eq}) at Receptor R5. Thus, the existing ambient noise levels at all measured off-site locations are above the City's presumed daytime and nighttime ambient noise standards of 60 dBA and 55 dBA, respectively, for District 2. Therefore, consistent with the LBMC, the measured existing ambient noise levels are used as baseline conditions for the purposes of determining Project impacts.

(3) Existing Ground-Borne Vibration Levels

Based on field observations, the primary source of existing ground-borne vibration in the Project vicinity is vehicular travel (i.e., standard cars, refuse trucks, delivery trucks, construction trucks, school buses, and transit buses) on local roadways. According to the FTA technical study "Federal Transit Administration: Transit Noise and Vibration Impacts Assessments," typical road traffic-induced vibration levels are unlikely to be perceptible by people. Specifically, the FTA study reports that "[i]t is unusual for vibration from sources

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Figure IV.D-1
Noise Monitoring Locations

Source: Google Earth, 2018; Eyestone Environmental, 2018.

Table IV.D-5
Description of Noise Measurement Locations

Receptor Location	Description	Approximate Distance from Measurement Location to Nearest Project Site Boundary[a]	Nearest Noise-Sensitive Land Use(s)
R1	W. Seaside Way—Front of Residential Uses	450 feet	Multi-Family Residential
R2	Renaissance Hotel	200 feet	Hotel (Existing)
R3	Pine Avenue—Project Site Western Boundary	Western Boundary of Site	Multi-Family Residential
R4	E. Seaside Way—Front of Residential Uses	950 feet	Multi-Family Residential
R5	Ocean Boulevard—Front of Residential Uses	560 feet	Multi-Family Residential

[a] *Distances are estimated using Google Earth.*

Source: Eyestone Environmental, 2019. See Appendix D of this Draft EIR.

such as buses and trucks to be perceptible, even in locations close to major roads."[18] Trucks and buses typically generate ground-borne vibration velocity levels of around 63 VdB at a distance of 50 feet, and these levels could reach 72 VdB when trucks and buses pass over bumps in the road. Per the FTA, 75 VdB is the dividing line between barely perceptible and distinctly perceptible.[19] Therefore, it is expected that the existing ground vibration environment in the vicinity of the Project Site would be below the perceptible level.

[18] *FTA, Transit Noise and Vibration Impact Assessment, 2006, p. 7-1.*

[19] *FTA, Transit Noise and Vibration Impact Assessment, May 2006, Figure 10-1.*

Table IV.D-6
Existing Ambient Noise Levels

Receptor Location	Noise Receptors Approximate Distance to Project Site[a]	Measured Noise Levels, dBA L_{eq}	
		Daytime Hours (7:00 A.M.–10:00 P.M.)	Nighttime Hours (10:00 P.M.–7:00 A.M.)
R1. E. Seaside Way—Front of Residential Uses	450 feet	65.4	62.1
R2. Renaissance Hotel	200 feet	70.6	68.2
R3. Pine Avenue—Project Site Western Boundary	Western Boundary of Site	64.8	62.7
R4. W. Seaside Way—Front of Residential Uses	700 feet	60.4	59.9
R5. Ocean Boulevard—Front of Residential Uses	560 feet	68.5	70.0

[a] *Distances are estimated using Google Earth.*

[b] *Estimated based on short-term (15-minute) noise measurement based on Federal Transit Administration (FTA) procedures.*

Source: Eyestone Environmental, 2018. See Appendix D of this Draft EIR.

3. Project Impacts

a. Methodology

(1) On-Site Construction Activities

Construction noise impacts due to on-site construction activities were evaluated by calculating the Project construction-related noise level at representative sensitive receptor locations and comparing these noise levels to the existing ambient noise levels (i.e., noise levels without construction noise from the Project). Construction noise associated with the Project was calculated based on the Project's anticipated construction equipment inventory, construction activity durations, and construction schedule. The construction noise model for the Project is based on construction equipment noise levels as published by the FHWA's "Roadway Construction Noise Model (FHWA 2006)." The ambient noise levels at surrounding sensitive receptor locations were based on field measurement data (see Table IV.D-6). The construction noise levels were then calculated for sensitive receptor locations based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance. Additional noise attenuations were assigned to receptor locations where the line of sight to the Project Site was interrupted by the presence of intervening structures.

(2) Off-Site Construction Haul Trucks

Project-related off-site construction haul trucks noise impacts were analyzed using the FHWA's Technical Noise Supplement (TeNS) model. Noise generated by construction trucks along the anticipated haul route described above would be approximately 71.0 dBA (hourly L_{eq}), which would be below the significance threshold of 5 dBA above ambient levels measured at Receptor R5 along Ocean Boulevard. In addition, construction truck traffic would not occur during the noise-sensitive late evening and nighttime hours.

(3) On-Site Stationary Noise Sources (Operation)

On-site stationary point-source noise impacts were evaluated by identifying the noise levels that would be generated by Project outdoor stationary noise sources such as rooftop mechanical equipment, parking facilities, and outdoor activities, calculating the noise level from each noise source at surrounding sensitive receptor property line locations, and comparing such noise levels to ambient noise levels to determine significance. To provide a conservative analysis, the maximum allowable noise emission level from outdoor mechanical equipment was calculated based on the maximum sound level permitted by the LBMC.

(4) Off-Site Roadway Noise (Operation)

As discussed in Subsection 2, Environmental Setting, above, off-site roadway noise was analyzed using the FHWA TeNS model and traffic data from the Project's Traffic Study included as Appendix E.1 of this Draft EIR. Roadway noise attributable conditions without the Project were calculated and compared to noise levels that would occur with implementation of the Project to determine Project noise impacts for operational off-site roadway noise.

(5) Construction Vibration

Ground-borne vibration impacts due to Project construction activities were evaluated by identifying potential vibration sources (i.e., construction equipment), estimating the vibration levels at the potentially affected receptor, and comparing with the Project significance thresholds, as described below.

(6) Operational Vibration

The primary source of Project operational vibration would include passenger vehicle circulation within the proposed parking facilities. The Project would also include typical commercial-grade stationary mechanical equipment such as condenser units, which would incorporate vibration attenuation mounts to reduce the vibration transmission to the building. Typically, ground-borne vibration attenuates rapidly as a function of distance from the vibration source. In addition, the surface parking areas are already present within the Project Site. Therefore, Project operations would not increase the existing vibration levels in the immediate vicinity of the Project Site, and as such, vibration impacts associated with Project operations would be less than significant. Accordingly, the ground-borne vibration analysis presented in this report is limited to Project-related construction activities.

(7) Land Use Compatibility

The Project's land use compatibility with respect to noise was evaluated based on the measured site ambient noise levels as compared to the State Guidelines for Compatible Land Use provided above.

b. Thresholds of Significance

Appendix G of the CEQA Guidelines (Appendix G) provides a set of sample questions that address impacts with regard to noise. These questions are as follows:

Would the Project result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- A substantial permanent increase in ambient noise levels in the vicinity of the project above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

As discussed in the Project's Initial Study included as Appendix A of this Draft EIR, the Project Site is not located within an airport land use plan, within 2 miles of an airport, or in the vicinity of a private air strip. The nearest airport is the Long Beach Airport located approximately 3.8 miles north of the Project Site. As such, no further analysis of airport/airstrip noise is necessary.

In the context of the above questions from Appendix G and the regulatory framework described above, the significance thresholds related to noise are presented below.

(1) Construction Noise

With respect to construction activities, the City does not have a quantitative noise limit for construction activities if such activities occur during permitted hours (as discussed above). However, in the context of the questions from Appendix G, construction noise impacts can occur if such noise substantially increases the ambient noise levels. As it relates to environmental noise, changes in noise levels greater than 5 dBA are readily noticeable and are considered a significant increase, while changes of less than 3 dBA generally are not discernible to most people. Therefore, the Project would have a significant impact on noise levels associated with construction activities if:

- Construction activities produce noise exceeding existing ambient exterior sound levels by 5 dBA or more at a noise-sensitive use.

(2) Construction Vibration

The ground-borne vibration limit provided by the City of Long Beach is based on human perception in terms of acceleration level in g's. As discussed above, vibration levels can be described in terms of acceleration or velocity. Since the published vibration levels for typical construction equipment are expressed in terms of velocity (PPV and/or VdB), the FTA guidelines (in terms of velocity) are used to evaluate potential impacts related to construction vibration for both potential building damage and human annoyance. Based on this FTA guidance, impacts relative to ground-borne vibration associated with potential building damage would be considered significant if any of the following future events were to occur:

- Project construction activities cause ground-borne vibration levels to exceed 0.5 PPV at the nearest off-site reinforced-concrete, steel, or timber building.
- Project construction activities cause ground-borne vibration levels to exceed 0.3 PPV at the nearest off-site engineered concrete and masonry building.
- Project construction activities cause ground-borne vibration levels to exceed 0.2 PPV at the nearest off-site non-engineered timber and masonry building.

- Project construction activities cause ground-borne vibration levels to exceed 0.12 PPV at buildings extremely susceptible to vibration damage, such as historic buildings.

Construction vibration impacts associated with human annoyance would be significant if the following were to occur:

- Project construction activities cause ground-borne vibration levels to exceed 75 VdB at off-site sensitive uses, including residential uses.

(3) Operational Noise

The Project would have a significant impact on noise levels from Project operations if:

- The Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (see Table IV.D-2 on page IV.D-7 for a description of these categories);

- The Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 5 dBA CNEL or greater; or

- Project-related operational (i.e., non-roadway) noise sources such as outdoor building mechanical/electrical equipment, outdoor activities, or parking facilities exceed the City Exterior Noise Standard or the measured ambient noise level, whichever is greater.

c. Project Design Features

The following project design features are proposed with regard to noise and vibration:

Project Design Feature NOI-1: Power construction equipment (including combustion engines), whether fixed or mobile, shall be equipped with state-of-the-art noise shielding and muffling devices (consistent with manufacturers' standards). All equipment shall be properly maintained to assure that no additional noise due to worn or improperly maintained parts would be generated.

Project Design Feature NOI-2: Project construction shall not include the use of driven piles systems.

Project Design Feature NOI-3: During operation, Project-related outdoor mechanical equipment shall be designed so as not to exceed 55 dBA at the Project property line, in accordance with the LBMC.

Project Design Feature NOI-4: Project loading dock and trash collection areas shall be designed such that the line of sight between these noise sources and any adjacent noise sensitive land use shall be obstructed to the extent necessary to comply with LBMC.

Project Design Feature NOI-5: Outdoor amplified sound systems shall be designed so as not to exceed a maximum noise level of 80 dBA (L_{eq}) at a distance of 50 feet from the amplified sound system.

d. Analysis of Project Impacts

(1) Construction Noise

The Project would involve demolition of the existing surface parking lot and construction of a hotel, restaurant, meeting spaces, and associated parking. Construction activities would include demolition, excavation, building construction, architectural coatings and paving. Construction would take place over approximately 30 months, anticipated to begin in early-2020, with completion in 2022. During construction, a variety of heavy-duty diesel powered equipment would be used on-site. Building construction and finishing activities will require equipment such as excavators, drill rigs, cranes, concrete pumps, and air compressors. Construction would require demolition of the asphalt parking lot and retaining walls and approximately 23,500 cubic yards of soil removal and export.

During construction, regional access to and from the Project Site for construction trucks associated with hauling and deliveries would be provided via I-710. It is anticipated that construction worker traffic would utilize both regional and local roadways to travel to and from the Project Site, including Shoreline Drive and Pine Avenue

(a) On-Site Construction Noise

Noise impacts from Project construction activities occurring within or adjacent to the Project Site would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise sensitive receptors. Construction activities would generally include demolition, site grading, and building construction. Each stage of construction would involve the use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. Demolition generally involves the use of backhoes, front-end loaders, and heavy-duty trucks. Grading typically requires the use of earth moving equipment, such as excavators, front-end loaders, and heavy-duty trucks. Building construction typically involves the use of cranes, forklifts, concrete trucks, and delivery trucks. Noise from construction equipment would generate both steady-state and episodic noise that could be heard within and adjacent to the Project Site.

Individual pieces of construction equipment that would be used for Project construction produce maximum noise levels (L_{max}) of 74 dBA to 90 dBA at a reference distance of 50 feet from the noise source, as shown in Table IV.D-7 on page IV.D-22. These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites often operates under less than full power conditions, or partial power. To more accurately characterize construction-period noise levels, the average (hourly L_{eq}) noise level associated with each construction stage is calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage.[20] These noise levels are typically associated with multiple pieces of equipment operating simultaneously.

Table IV.D-8 on page IV.D-23 provides the estimated construction noise levels for various construction stages at the off-site noise sensitive receptors. The estimated noise levels represent a worst-case scenario in which all construction equipment was assumed to operate simultaneously and assumed to be located at the construction area nearest to the affected receptors. These assumptions are considered conservative as construction activities would typically be spread throughout the entire site, with much of the construction equipment located further away from the affected receptors. As indicated in Table IV.D-8, the estimated construction-related noise levels would be below the significance threshold of 5 dBA over ambient levels at all sensitive receptor locations. The analysis assumes that construction equipment would be equipped with standard noise mufflers and noise shielding to reduce noise. Construction activities also would comply with the City of Long Beach Noise Ordinance Chapter 8.80.202, which restricts construction and demolition activities to the hours of 7:00 A.M. to 6:00 P.M. Monday through Friday, and 8:00 A.M. to 6:00 P.M. on Saturday. Therefore, temporary noise impacts associated with the Project's on-site construction activities would be less than significant.

(b) Off-Site Construction Noise

In addition to on-site construction noise sources, a variety of mobile sources including materials delivery, concrete mixing, haul trucks (construction trucks), and construction worker vehicles would require access to the Project Site during the Project construction period. The major noise sources associated with off-site construction trucks

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[20] *Pursuant to the FHWA Roadway Construction Noise Model User's Guide, 2006, the usage factor is the percentage of time during a construction noise operation that a piece of construction is operating at full power.*

Table IV.D-7
Construction Equipment Noise Levels

Equipment	Estimated Usage Factor[a] %	Typical Noise Level at 50 feet from Equipment, dBA (L_{max})
Air Compressor	40	78
Cement and Mortar Mixer	50	80
Concrete Mixer Truck	40	79
Concrete Saw	20	90
Crane	16	81
Forklift	10	75
Generator	50	81
Grader	40	85
Dump/Haul Truck	40	76
Excavator	40	81
Paver	50	77
Pump	50	81
Roller	20	80
Rubber Tired Loader	40	79
Tractor/Loader/Backhoe	40	80
Delivery Truck	40	74
Welders	40	74

[a] *Usage factor represents the percentage of time the equipment would be operating at full speed.*

Source: FHWA, Roadway Construction Noise Model User's Guide, 2006.

would be from delivery/haul trucks. The peak period of construction trucks would be during the mat foundation (concrete pour) phase, when there would be up to a maximum of 415 concrete trucks (415 inbound trips and 415 outbound trips) per day. There would be fewer construction-related trucks during other construction phases, with up to 85 delivery trucks per day. Therefore, the noise analysis is based on the peak period (i.e., the site grading phase), with a maximum of 415 trucks per day (830 total one-way trips). Based on an 8-hour daily haul period and a uniform distribution of trips, there would be an average of approximately 52 trucks (52 inbound trips and 52 outbound trips) per hour. Inbound haul trucks would generally arrive at the Project Site via I-710, West Shoreline Drive, and Pine Avenue. Outbound haul trucks would exit the site onto Pine Avenue, travel west along Ocean Boulevard, and north along West Shoreline Drive to I-710. During the mat foundation concrete pour phase, trucks may operate during nighttime hours (7 P.M.–7 A.M.) in order to avoid traffic impacts during daytime hours. Although the City of Long Beach generally does not allow construction activities after 7 P.M., the City's Health Department

Table IV.D-8
Construction Noise Impacts

Off-Site Receptor Location[b]	Approximate Distance from Receptor to Project Construction Area (feet)	Estimated Construction Noise Levels by Construction Phases, L_{eq} (dBA)[c]				Measured Daytime Ambient Noise Levels, L_{eq} (dBA)	Significance Threshold,[a] L_{eq} (dBA)	Significant Impact?
		Demolition	Grading	Building Foundation/ Construction	Paving/ Concrete/ Landscape			
R1	450	56	55	57	47	65.4	70.4	No
R2[d]	200	68	67	69	59	70.6	75.6	No

[a] *Significance thresholds are equivalent to the measured daytime ambient noise levels (see Table IV.D-6 on page IV.D-15) plus 5 dBA.*

[b] *Analysis includes receptors within 500 feet of the Project Site. As other receptors are located farther away, noise impacts at other receptors would be less than the values presented in this table.*

[c] *Noise levels take into account barrier insertion loss (no direct line of sight) between the Project site and receptor location.*

[d] *The significance threshold and impact are not applicable, as R2 is not considered a noise sensitive receptor. The estimated noise levels are provided for informational purposes.*

Source: Eyestone Environmental, 2019. See Appendix D of this Draft EIR.

Noise Control Officer may grant a permit allowing work beyond 7 P.M. All other phases of construction would comply with the LBMC regarding construction hours.

The off-site construction truck noise impacts were analyzed using the FHWA's TeNS model. Noise generated by construction trucks along the anticipated haul route described above would be approximately 71.7 dBA (hourly L_{eq}), which would be below the significance threshold of 5 dBA above ambient levels measured at Receptor R5 along Ocean Boulevard for both daytime and nighttime hours.

As such, significant noise impacts would not be expected from off-site construction traffic, and no mitigation measures are required.

(2) Construction Vibration

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receptor buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels to low rumbling sounds and perceptible vibration at moderate levels. However, ground-borne vibrations from construction activities rarely reach levels that damage structures.

The Project would generate ground-borne construction vibration during site demolition and excavation/grading activities when heavy construction equipment, such as large bulldozers, is used. The FTA has published standard vibration velocities for various construction equipment operations. The typical vibration levels (in terms of inches per second PPV) at a reference distance of 25 feet for construction equipment anticipated to be used during Project construction are listed in Table IV.D-9 on page IV.D-25.[21] In accordance with Project Design Feature NOI-2, Project construction would not use impact pile driving methods, and as such, impact pile driving vibration is not included in this construction vibration analysis.

Table IV.D-9 provides the estimated vibration velocity levels at the off-site structures nearest to the Project construction area. As indicated therein, vibration velocities from typical heavy construction equipment operations that would be used during construction of the Project would range from 0.003 to 0.089 PPV at 25 feet from the equipment. The

[21] *FTA, Transit Noise and Vibration Impact Assessment, May 2006.*

Table IV.D-9
Construction Vibration Impacts—Building Damage

Equipment	Reference Vibration Velocity Levels at 25 ft. inch/second (PPV)	Estimated Vibration Velocity Levels at the Nearest Off-Site Structures from the Project Construction Equipment, inch/second (PPV)			
		100 ft. to the South (commercial building)	200 ft. to the North (commercial building)	50 ft. to the East (commercial building)	50 ft. to the West (commercial building)
Large bulldozer	0.089	0.009	0.019	0.042	0.042
Caisson drilling	0.089	0.009	0.019	0.042	0.042
Loaded trucks	0.076	0.008	0.017	0.035	0.035
Jackhammer	0.035	0.004	0.008	0.016	0.016
Small bulldozer	0.003	0.000	0.001	0.001	0.001
Significance Threshold, inch/second (PPV)		0.2	0.2	0.2	0.2

Source: FTA, 2006, Eyestone Environmental, 2019. See Appendix D of this Draft EIR.

Ocean Center Building is located approximately 50 feet to the west of the site and would experience vibration velocities up to 0.042 PPV. The Breakers Building is located 250 feet to the east of the site and would experience vibration levels of less than 0.019 PPV. The estimated vibration velocity levels (from all construction equipment) would be well below the significance thresholds of 0.3 PPV, applicable to the commercial buildings surrounding the Project Site. Therefore, vibration impacts associated with potential building damage during construction activities would be less than significant.

As described above, vibration levels generated by construction equipment would range from 0.003 to 0.089 PPV (or 58 to 87 VdB) at a distance of 25 feet from the construction equipment. With regard to human annoyance, the nearest off-site residential use is approximately 450 feet from the Project Site. At a distance of 450 feet, the vibration level from the Project construction area would be attenuated to a maximum of 59 VdB at the nearest off-site residential use (Receptor R1). The estimated vibration level at Receptor R1 would be well below the 75 VdB significance threshold. In addition to the sensitive uses identified in Table IV.D-5, the Ocean Center Building is located 50 feet to the west of the site and the Breakers. Therefore, temporary vibration impacts related to human annoyance during the construction period would be less than significant.

Construction trucks would generate ground-borne vibration as they travel along the Project designated haul route. Thus, an analysis of potential vibration impacts associated with building damage and human annoyance from ground-borne vibration along the local haul route was conducted. Based on FTA data, the vibration generated by a typical truck would be approximately 63 VdB (0.006 PPV) at a distance of 50 feet from the truck.[22] There are existing buildings along the Project's haul route approximately 25 feet from the roadway and that would be exposed to ground-borne vibration levels of approximately 0.016 PPV or 72 VdB. The estimated vibration generated by haul trucks along the haul route would be well below the most stringent building damage threshold of 0.12 PPV for buildings extremely susceptible to vibration. Residential uses at receptor R5 are located approximately 100 feet from the primary construction haul route. Based on a distance of 100 feet, these residential uses would experience vibration levels of 50 VdB (0.0013 PPV) due to haul truck activity, which is well below the 0.2 PPV significance threshold for building damage and below the 75 VdB threshold for human annoyance. Therefore, potential impacts associated with vibration from haul trucks traveling along the designated haul route would be less than significant.

Although Project-related construction vibration impacts to occupied buildings (residential, commercial) would be less than significant, a historic structure, the subterranean Jergins Trust Tunnel, is located adjacent to the Project Site. As discussed above in Section 5, Cultural Resources, the Jergins Trust Tunnel is an underground pedestrian walkway located below Ocean Boulevard and Victory Park, just east of and parallel to Pine Avenue. The Jergins Trust Tunnel was declared a historic landmark in 2009. The tunnel is currently not visible from the street, nor is it open to the public.

As part of Project development, the Jergins Trust Tunnel would be reopened by connecting the proposed building to it at the lower level. A new entry lobby would be constructed adjacent to the tunnel, and the tunnel would be cleaned, stabilized, and improved to allow public access. Vibration from these construction activities would have the potential to damage the tunnel. As discussed earlier in Section IV.B, Cultural Resources, of this Draft EIR, Mitigation Measure HIS-2 would require active vibration monitoring within the tunnel throughout Project construction. Furthermore, all work within the Jergins Trust Tunnel would meet the Secretary of the Interior's Standards. CEQA Guidelines Section 15064.5 states: "Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards…shall be considered as mitigated to a level of less than a significant impact on the historical resource." Therefore, with implementation of Mitigation Measure HIS-2 and compliance with the Secretary of the Interior's Standards, construction-related vibration impacts affecting the Jergins Trust Tunnel would be reduced to a less than significant level.

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[22] *FTA, Transit Noise and Vibration Impact Assessment, May 2006, Figure 7-3.*

(3) Operational Noise

This section provides a discussion of potential operational noise impacts on nearby noise-sensitive receptors. Specific operational noise sources addressed herein include: (a) on-site stationary noise sources, which consist of outdoor mechanical equipment (i.e., rooftop condenser units), activities associated with the outdoor spaces, and parking facilities; and (b) off-site mobile (roadway traffic) noise sources.

(a) On-Site Stationary Noise Sources

(i) Mechanical Equipment

The operation of mechanical equipment such as air conditioners, fans, and related equipment may generate audible noise levels. However, the Project's mechanical equipment would be located on the building's rooftop or in the interior of the building, shielded from nearby land uses to attenuate noise. In addition, all mechanical equipment would be designed with appropriate noise control devices, such as sound screen/parapet walls, to comply with the noise limitation requirements set forth in LBMC, which limits the noise from air conditioning equipment to 55 dBA at the property line.

The nearest off-site sensitive use, the hotel north of the Project Site (Receptor R2), is located approximately 200 feet away, and the closest residential uses are to the west (Receptor R1), approximately 450 feet from the Project Site. Given the location of these uses, noise from the Project's mechanical equipment would be reduced to below the existing nighttime ambient noise levels shown in Table IV.D-6 on page IV.D-15 due to distance attenuation. Therefore, noise impacts from mechanical equipment would be less than significant.

(ii) Outdoor Spaces

The Project includes various outdoor spaces, including: an outdoor patio area and a variety of amenities for hotel guests and visitors including an 11,288-square-foot pool deck and bar. A restaurant and an outdoor patio would be located on Level 3, wrapping around the north, west, and south sides of the building. Atop the podium, Level 6 would include various outdoor hotel amenities including a pool, spa, and planted areas. Level 7 would include an outdoor planted area along the building's eastern side. Levels 26 through 29 would include balconies, and an outdoor seating area with landscaping associated with the proposed restaurant would be located on Level 30.

Noise associated with the outdoor spaces would include people talking and potential background music (i.e., amplified sound). An amplified sound system would possibly be used at the outdoor patio area (Level 3), the pool deck and bar (Level 6), and the rooftop.

To evaluate noise from people talking, reference noise levels of 65 dBA and 62 dBA (L_{eq} at a 3.3-foot distance) for a male and female, respectively, speaking in raised voice levels were used for analyzing noise from the use of these areas.[23] In order to analyze a typical noise scenario, it was assumed that up to 50 percent of the people (half of which would be male and the other half female) would be talking at the same time. With regard to amplified sound, the possible sound system would be intended to provide sufficient loudness to be heard by people in the immediate vicinity of the outdoor patios and pool deck. For the noise analysis, the amplified program sound system was assumed to have a maximum noise level of 75 and 90 dBA L_{eq} at a distance of 15 feet from the speaker locations at the outdoor patio and the pool deck/rooftop, respectively, ensuring that the amplified program sound would not exceed the significance threshold (i.e., an increase of 5 dBA L_{eq}) at any off-site noise-sensitive receptor.

Table IV.D-10 on page IV.D-29 presents the estimated noise levels associated with use of the outdoor spaces at the off-site sensitive receptors within 500 feet of the site.[24] As indicated therein, the estimated noise levels at all off-site receptors would be below the significance threshold of 5 dBA (L_{eq}) above ambient noise levels. As such, noise impacts from use of the outdoor spaces would be less than significant, and no mitigation measures are required

(iii) Parking Facilities

The Project would provide 151 on-site parking spaces, which would be located within a one subterranean parking level and a partial at-grade parking level. Noise generated within the subterranean parking level would be effectively shielded from the off-site sensitive receptors, since the subterranean parking level would be fully enclosed. The partial at-grade parking level would be mostly enclosed, with openings limited to the garage driveways.

The Project would also include 280 off-site valet parking spaces at the existing Terrace Theater Parking Garage, located approximately 0.2 mile southeast of the Project site. This lot would be used to handle overflow parking during peak demand. Noise from on-site and off-site parking lots would be regulated by LBMC Chapter 8.80, which limits noise generated by motor vehicles within Project parking facilities.

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[23] *Harris, Cyril M., Handbook of Acoustical Measurements and Noise Control, Third Edition, 1991, Table 16.1.*

[24] *Analysis includes receptors within 500 feet of the Project Site. As other receptors are located farther away, noise impacts at other receptors would be less than the values presented in the table.*

Table IV.D-10
Estimated Noise Levels from Outdoor Space Activities

Receptor Location[b]	Existing Nighttime Ambient Noise Levels, dBA (L_{eq})	Estimated Noise Levels from Outdoor Spaces, dBA (L_{eq})[c]			Significance Threshold[a]	Significant Impact?
		Amplified Sound	People	Amplified Sound + People		
R1	62.1	60.5	50.5	60.9	67.1	No
R2[d]	68.2	67.5	57.5	67.9	73.2	No

[a] *Significance thresholds are equivalent to the measured ambient noise levels (see Table IV.D-6 on page IV.D-15).*

[b] *Analysis includes receptors within 500 feet of the Project Site. As other receptors are located farther away, noise impacts at other receptors would be less than the values presented in this table.*

[c] *Noise levels take into account barrier insertion loss (no direct line of sight) between the Project site and receptor location.*

[d] *The significance threshold and impact are not applicable, as R2 is not considered a noise sensitive receptor. The estimated noise levels are provided for informational purposes.*

Source: Eyestone Environmental, 2019. See Appendix D of this Draft EIR.

As all visitors will be required to valet their vehicle, valet trips were accounted for in the trip distribution and assignment analysis for the Project Traffic Study, included as Appendix E.1 of this Draft EIR. Valet trips are expected to make a right turn on to eastbound Ocean Boulevard followed by a right at Locust Avenue or Collins Way to access Seaside Way and enter either the on- or off-site parking garage. As discussed below, noise levels due to Project-related vehicle trips along Ocean Boulevard and Seaside Way would not exceed significance thresholds. Therefore, noise impacts associated with on and off-site parking facilities would be less than significant, and no mitigation measures are required.

(iv) Loading Dock/Trash Collection Areas

The loading dock and trash compactor for the Project would be provided at south east corner of the Project Site and would be shielded from off-site sensitive receptors. Delivery trucks and trash collection trucks would access the loading dock and trash compactor from Seaside Way. The existing parking structure east of the site would provide shielding from loading activities and trash compactor noise and would not exceed the ambient noise level by more than 5 dBA. Table IV.D-11 on page IV.D-30 presents the estimated noise levels from loading dock and trash compactor operations at the off-site receptors. As indicated therein, the estimated noise levels at both off-site As indicated therein, the estimated noise levels at both off-site receptors would be below the

Table IV.D-11
Noise Impacts from Loading Docks and Trash Compactor

Receptor Location[a]	Existing Daytime Ambient Noise Levels, dBA (L_{eq})	Estimated Noise Levels from Loading Docks and Trash Compactor, dBA (L_{eq})[b]	Significance Threshold[c]	Significant Impact?
R1	65.4	38.1	70.4	No
R2[d]	70.6	45.2	75.6	No

[a] *Analysis includes receptors within 500 feet of the Project Site. As other receptors are located farther away, noise impacts at other receptors would be less than the values presented in this table.*
[b] *Noise levels take into account barrier insertion loss (no direct line of sight) between the Project site and receptor location.*
[c] *Significance thresholds are equivalent to the measured daytime ambient noise levels (see Table IV.D-6 on page IV.D-15).*
[d] *The significance threshold and impact are not applicable, as R2 is not considered a noise sensitive receptor. The estimated noise levels are provided for informational purpose.*
Source: Eyestone Environmental, 2019. See Appendix D of this Draft EIR.

significance threshold. Therefore, noise impacts from loading docks and trash compactor operations would be less than significant.

(b) Off-Site Traffic (Mobile Sources)

(i) Future Plus Project

Prior to any reductions for pass-by trips or internal capture, the Project is expected to generate a total of 6,224 daily trips, based on the Project's Traffic Study included in Appendix E.1 of this Draft EIR.[25] Project-generated traffic noise impacts were evaluated by comparing the increase in noise levels from the "future without project" condition to the "future with project" condition with the Project's significance threshold. In addition, potential mobile noise impacts were also evaluated by comparing Project-related traffic with the existing baseline traffic noise conditions as a conservative analysis. The cumulative noise impacts due to off-site traffic were analyzed by comparing the projected increase in traffic noise levels from existing conditions to "future with project" conditions to the Project's significance criteria. Traffic noise levels at the off-site noise sensitive receptors were calculated using FHWA's TeNS Model and the Project's traffic volume data. The traffic noise impact analysis is based on the 24-hour CNEL noise descriptor.

[25] *Fehr & Peers, 100 E. Ocean Boulevard Transportation Impact Analysis, Long Beach, California, September 28, 2018.*

Table IV.D-12 on page IV.D-32 provides a summary of the off-site roadway noise impact analysis. The calculated CNEL levels are conservative as they are calculated in front of the roadways and do not account for the presence of any physical sound barriers or intervening structures. As shown in Table IV.D-12, traffic from the Project would result in an increase in noise levels of up to 2.1 dBA along Seaside Way as compared to the future conditions without Project. However, Project-related traffic would result in a minimal increase in noise levels at other study roadway segments in the Project vicinity. The cumulative traffic volumes would likewise result in a maximum increase of 2.2 dBA CNEL along Seaside Way, east of Pine Avenue. Typically, a minimum 3 dBA change in the noise environment (increase and/or decrease) is considered the threshold of human perception, and thus these noise increases generally would not be perceptible. The estimated noise increases also would be below the more stringent 3 dBA significance threshold (applicable when noise levels fall within the normally unacceptable category) under both existing and future scenarios. Therefore, off-site traffic noise impacts associated with the Project would be less than significant, and no mitigation measures are required.

(ii) Existing Plus Project

The analysis of off-site traffic noise impacts above was based on the incremental increase in traffic noise levels attributable to future with Project conditions as compared to future without the Project conditions. Additional analysis was conducted to determine the potential noise impacts based on the increase in noise levels due to Project-related traffic compared with the existing baseline traffic noise conditions.

As shown in Table IV.D-12, under Project Existing Impacts, the Project would result in a maximum 2.2 dBA (CNEL) increase in traffic-related noise levels along Seaside Way east of Pine Avenue. The estimated increase in off-site traffic noise levels as compared to existing conditions would be well below the 3-dBA CNEL significance threshold. Therefore, off-site traffic noise impacts associated with Existing Plus Project Conditions would be less than significant.

(c) Composite Noise Level Impacts from Project Operations

In addition to considering the potential noise impacts to neighboring noise-sensitive receptors from each specific off-site and on-site noise source (e.g., traffic, mechanical equipment, and outdoor areas), an evaluation of the potential composite noise level increase (i.e., noise levels from all noise sources combined) at the analyzed sensitive receptor locations was also performed. This evaluation of composite noise levels was completed using the CNEL noise metric. Table IV.D-13 on page IV.D-33 presents the estimated composite noise levels in terms of CNEL at the off-site receptors. As indicated therein, the Project would result in an increase of 1.9 dBA at the off-site residential use (Receptor R1), which would be below the more stringent 3-dBA significance threshold.

Table IV.D-12
Off-Site Traffic Noise Impacts

Roadway Segment	Adjacent Noise Sensitive Land Use	Calculated Traffic Noise Levels, dBA (CNEL)[a]				Increase in Noise Levels, dBA (CNEL)		
		Existing (A)	Existing + Project (B)	Future No Project (C)	Future + Project (D)	Project (Future) Impacts (D – C)	Project (Existing) Impacts (B – A)	Cumulative Impacts (D – A)
Ocean Boulevard								
West of Pacific	Residential	74.4	74.7	74.9	75.1	0.2	0.3	0.7
Between Pine Avenue and Long Beach Boulevard	Hotel	74.3	74.7	74.9	75.2	0.3	0.4	0.9
Pine Avenue								
Between Ocean Boulevard and Seaside Way	Project Site	66.8	68.7	67.0	68.9	1.9	1.9	2.1
Seaside Way								
West of Pine Avenue	Residential	63.6	64.4	63.7	64.4	0.7	0.8	0.8
East of Pine Avenue	Residential	64.5	66.7	64.6	66.7	2.1	2.2	2.2

[a] *Detailed calculation worksheets are included in Appendix D of this EIR.*
Source: Eyestone Environmental, 2019.

Table IV.D-13
Composite Noise Impacts

Receptor Location[a]	Existing Ambient Noise Levels, CNEL (dBA)	Calculated Project-Related Noise Sources, CNEL (dBA)		Project Composite Noise Levels, CNEL (dBA)	Ambient Plus Project Noise Levels, CNEL (dBA)	Increase in Noise Levels due to Project, CNEL (dBA)	Significant Impact?
		Loading/ Trash Areas	Outdoor Spaces				
R1	65.4	38.1	60.9	60.9	66.7	1.3	No
R2	70.6	45.2	67.9	67.9	72.5	1.9	No

[a] *Analysis includes receptors within 500 feet of the Project Site. As other receptors are located farther away, noise impacts at other receptors would be less than the values presented in this table.*

Source: Eyestone Environmental, 2019. See Appendix D of this Draft EIR.

Therefore, composite noise level impacts due to Project operations would be less than significant.

4. Cumulative Impacts

The Project together with the related projects and future growth could contribute to cumulative noise impacts. The potential for cumulative noise impacts to occur is specific to the distance between each related project and their respective stationary noise sources, as well as the cumulative traffic that these projects would add on the surrounding roadway network.

a. Construction Noise and Vibration

As indicated in Section III, Environmental Setting, of this Draft EIR, 54 related projects have been identified in the vicinity of the Project Site. Noise from construction of development projects is typically localized and has the potential to affect noise-sensitive uses within 500 feet from the construction site. Thus, noise from construction activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for receptors located midway between the two construction sites. While the majority of the related projects are located a substantial distance (greater than 1,000 feet) from the Project Site, the following eight Related Projects 4, 7, 8, 25, 42, 45, and 48 are within 1,000 feet of the Project Site.

- Related Project No. 4 (207 Seaside Way) is a residential development located approximately 250 feet east of the Project Site. The Renaissance Hotel (noise sensitive receptor R2) is located within 500 feet of Related Project No. 4 and the Project Site. However, this related project is under construction and is anticipated to be completed prior to the start of the Project construction. Therefore, the Related Project No. 4 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 7 (110 W. Ocean Boulevard) is a residential development located approximately 80 feet west of the Project Site. Residential uses (noise sensitive receptor R1) is located within 500 feet of Related Project No. 7 and the Project Site. However, construction activities at this related project would maintain the existing structure and mainly involve interior work. In addition, the existing buildings at this related project would block the line of sight between the Project and sensitive receptor R1. Therefore, the Related Project No. 7 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 8 (150 W. Ocean Boulevard) is a residential development located approximately 180 feet west of the Project Site. Residential uses (noise sensitive receptor R1) is located within 500 feet of Related Project No. 8 and the Project Site. However, this related project is under construction and is anticipated to be completed prior to the start of the Project construction. Therefore, the Related Project No. 8 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 25 (107 Long Beach Boulevard) is a hotel development located approximately 750 feet northeast of the Project Site. The Renaissance Hotel (noise sensitive receptor R2) is located within 500 feet of Related Project No. 25 and the Project Site. However, this related project is under construction and is anticipated to be completed prior to the start of Project construction. Therefore, the Related Project No. 25 would not contribute to cumulative construction-related noise impacts.

- Related Project No. 42 (110 Pine Avenue) is an adaptive reuse hotel development located approximately 550 feet north of the Project Site. The Renaissance Hotel (noise sensitive receptor R2) is located within 500 feet of Related Project No. 42 and the Project Site. This related project is currently under construction but timeline for completion is not known and could possibly overlap with construction of the Project. Therefore, construction noise impacts resulting from the Project and Related Project No. 42 would be cumulatively considerable and would be considered significant.

- Related Project No. 45 (210 E. Ocean Boulevard) is an adaptive reuse hotel development located approximately 475 feet west of the Project Site. Residential uses (noise sensitive receptor R1) is located within 500 feet of Related Project No. 48 and the Project Site. However, this related project is currently proposed and under review. It is uncertain when construction activities would start at this related Project and construction of this related project could possibly overlap with construction of the Project. Therefore, construction noise impacts resulting from the Project and Related Project No. 45 would be cumulatively considerable and would be considered significant.

- Related Project No. 48 (200 W. Ocean Boulevard) is an adaptive reuse residential development located approximately 250 feet east of the Project Site. The Renaissance Hotel (noise sensitive receptor R2) is located within 500 feet of Related Project No. 48 and the Project Site. However, construction activities at this related project are mainly to renovate the existing building and would involve interior work. In addition, existing buildings in the vicinity would block the line of sight between the Project and sensitive receptor R2. Therefore, the Related Project No. 48 would not contribute to cumulative construction-related noise impacts.

Based on the above, cumulative noise impacts at the nearby sensitive uses located between the Project Site and Related Project Nos. 42 and 45 could occur if construction of these related projects overlaps with Project construction. Construction-related noise levels from the related projects would be intermittent and temporary, and it is anticipated that, as with the Project, the related projects would comply with the construction hours and other relevant provisions set forth in the LBMC. Noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures for each individual related project and compliance with locally adopted and enforced noise ordinances. Nonetheless, if nearby Related Project No. 42 and 45 were to be constructed concurrently with the Project, significant cumulative construction noise impacts could result.

In addition to the cumulative impacts of on-site construction activities, off-site construction haul trucks would not likely result in a cumulative impact due as the haul route would not include sensitive uses. Inbound haul trucks would generally arrive at the Project Site via I-710, West Shoreline Drive, and Pine Avenue. Outbound haul trucks would exit the Project Site onto Pine Avenue, travel along Ocean Boulevard and north along West Shoreline Drive to I-710. Uses along this route include commercial uses which are not considered sensitive receptors. Therefore, cumulative noise due to construction truck traffic from the Project and other related projects would not exceed ambient noise levels along the haul route by 5 dBA at sensitive receptors. As previously discussed, ground-borne vibration decreases rapidly with distance. Potential vibration impacts due to construction activities are generally limited to buildings/structures located in close proximity of a construction site (i.e., within 50 feet). As indicated above, the nearest related project is approximately 100 feet from the Project. Therefore, due to the rapid attenuation characteristics of ground-borne vibration, there is no potential for a cumulative construction impact with respect to ground-borne vibration, and cumulative impacts would be less than significant.

b. Long-Term Operations

The Project Site and surrounding area have been developed with uses that have previously generated and will continue to generate noise from a number of community noise sources, including vehicle travel, mechanical equipment (e.g., HVAC systems), outdoor activity areas, and intermittent lawn maintenance activities. Each of the related projects identified in the Project vicinity also would generate stationary-source and mobile-source noise due to ongoing day-to-day operations. Related Project Nos. 4, 7, 8, 45, 48, 42, and 25 include a limited amount of recreational, office, commercial/retail, restaurant, and hotel uses, which are not typically associated with excessive exterior noise levels.

Due to provisions set forth in the LBMC that limit stationary source noise from mechanical equipment, noise levels would be less than significant at the property line for each related project. In addition, with implementation of the proposed project design features presented earlier in this section, noise impacts associated with Project operations would be less than significant. Based on the distance of the related projects from the Project Site and the noise levels associated with the Project after implementation of the proposed project design features, cumulative stationary source noise impacts associated with operation of the Project and related projects would be less than significant. However, each project would produce traffic volumes that are capable of generating roadway noise impacts.

The Project combined with the related projects in the area would produce traffic (i.e., off-site mobile sources) that would generate roadway noise. Cumulative noise impacts due to off-site traffic were analyzed by comparing the projected increase in traffic noise levels from existing conditions to Existing Plus Project Conditions to the applicable significance criteria. Future cumulative conditions include traffic volumes from future ambient growth, related projects, and the Project. The calculated traffic noise levels under existing and Existing Plus Project weekday conditions are presented in Table IV.D-14 on page IV.D-37. As shown therein, on a typical weekday the cumulative traffic volumes would result in a maximum increase of 1.7 dBA (CNEL) along Seaside Way (East of Pine Avenue). On a typical weekend day, the cumulative traffic volumes would result in a maximum increase of 2.2 dBA (CNEL) along Seaside Way (East of Pine Avenue), as indicated in Table IV.D-14. At all other analyzed roadway segments, the increase in cumulative traffic noise would be lower. The increase in cumulative traffic noise would be below the most stringent 3 dBA significance threshold. Therefore, cumulative noise impacts due to off-site mobile noise sources associated with the Project, future growth, and related projects would be less than significant.

Table IV.D-14
Cumulative Roadway Traffic Noise Impacts (Weekday)

Roadway Segment	Adjacent Land Use	Calculated Traffic Noise Levels,[a] CNEL (dBA)		Increase in Noise Levels, dBA	Significant Impacts?
		Existing	Future Cumulative With Project		
Ocean Boulevard					
West of Pacific	Residential	74.4	75.1	0.7	No
Between Pine Avenue and Long Beach Boulevard	Hotel	74.3	75.1	0.8	No
Pine Avenue					
Between Ocean Boulevard and Seaside Way	Project Site	66.8	68.4	1.6	No
Seaside Way					
West of Pine Avenue	Residential	63.6	64.4	0.8	No
East of Pine Avenue	Residential	64.5	66.7	2.2	No

[a] *Detailed calculation worksheets are included in Appendix D of this Draft EIR.*

[b] *Noise compatibility is based on the most stringent land use, per the City's land use compatibility as provided in Table IV.D-2 on page IV.D-7.*

Source: Eyestone Environmental, 2019. See Appendix D of this Draft EIR.

5. Mitigation Measures

a. Construction

As analyzed above, although the estimated Project-level construction noise would be below the significance threshold during construction, cumulative construction noise impacts may result in exceedances of significance thresholds. Therefore, the following mitigation measures are included to reduce cumulative construction-related noise impacts:

Mitigation Measure NOI-1: Stationary source equipment that is flexible with regard to relocation (e.g., generators and compressors) shall be located so as to maintain the greatest distance from noise-sensitive land uses, and unnecessary idling of such equipment shall be prohibited.

Mitigation Measure NOI-2: Loading and unloading of heavy construction materials shall be located on-site and away from noise-sensitive uses, to the extent feasible.

Mitigation Measure NOI-3: A temporary and impermeable 15-foot high sound barrier shall be erected at the locations listed below. At plan check, building plans shall include documentation prepared by a qualified noise consultant verifying compliance with this measure. The sound barriers would only be required if construction of the related projects specified below overlap with Project construction activities.

- Along the north property line of the Project Site. The temporary sound barrier shall be designed to provide a minimum 10-dBA noise reduction at 50 feet of distance. This proposed temporary sound barrier shall be installed if the project proposed at 110 Pine Avenue will have construction activities overlap with Project construction.
- Along the eastern property line of the Project Site. The temporary sound barrier shall be designed to provide a minimum 10-dBA noise reduction at 50 feet of distance as specified by the manufacturer. This proposed temporary sound barrier shall be installed if the project proposed at 210 East Ocean Boulevard will have construction activities overlap with Project construction.

b. Operation

As discussed above, operation of the Project would not result in a significant impact to the off-site noise sensitive receptors. Therefore, no mitigation measures would be required.

6. Level of Significance After Mitigation

a. Construction

Implementation of the proposed mitigation measures would reduce Project construction noise levels to the extent feasible. In particular, implementation of Mitigation Measures NOI-1 through NOI-3 would reduce potential cumulative impacts at Receptor R1 and R2. The estimated construction-related noise reductions attributable to Mitigation Measures NOI-1 and NOI-2, although not easily quantifiable, also would reduce noise impacts associated with on-site construction activities to the extent feasible. The minimum 5 dBA noise reduction provided by these mitigation measures would reduce construction noise impacts at the nearest off-site noise-sensitive receptors to a less than significant level. Cumulative construction noise impacts would remain significant and unavoidable.

As analyzed above, Project-level and cumulative vibration impacts from Project construction activities would be less than significant.

b. Operation

Project-level and cumulative impacts with regard to operational noise would be less than significant.

IV. Environmental Impact Analysis

E. Transportation/Traffic

1. Introduction

This section of the Draft EIR analyzes the Project's potential impacts on traffic and access, including related transportation characteristics such as public transit and pedestrian and bicycle safety. In addition, although not considered an environmental issue under CEQA, this section evaluates the Project's parking supply relative to compliance with City of Long Beach (City) requirements. This section is based in part on the *100 E. Ocean Boulevard Transportation Impact Study* (Traffic Study) prepared for the Project by Fehr & Peers in July 2019, the *Shared Parking Study for 100 E. Ocean Boulevard Memorandum* (Parking Memo) prepared for the Project by Fehr & Peers in December 2018, and the *100 E. Ocean Boulevard Transportation Demand Management Plan* (TDM Plan) prepared for the Project by Fehr & Peers in August 2018. These reports are included as Appendices E.1, E.2, and E.3 of this Draft EIR, respectively.

The Traffic Study evaluates the Project's potential for impacts on the street system surrounding the Project Site. The following analysis conditions are analyzed:

- Existing Conditions (2018)—This scenario consists of traffic count data collected for the study intersections. Existing A.M. (7 to 9 A.M.) and P.M. (4 to 6 P.M.) peak period intersection counts were taken in September 2018 for Intersection Nos. 1–5; October 2018 for Intersection Nos. 6–8; November 2018 for Intersection Nos. 9–11, 14, and 15; and January 2019 for Intersection Nos. 12 and 13.

- Existing Plus Project Conditions (2018)—CEQA and the City of Long Beach require an evaluation of a project's traffic impacts on the existing environment as part of a traffic impact analysis. This analysis evaluates potential Project-related traffic impacts as compared to Existing Conditions during the typical weekday A.M. and P.M. peak periods for all study intersections.

- Future Without Project Conditions (2022)—This analysis projects the future traffic growth and intersection operating conditions during the typical weekday A.M. and P.M. peak periods that could be expected at the study intersections as a result of regional growth and related projects in the vicinity of the Project Site by the year 2022. The Future Without Project traffic conditions are projected by adding to the Existing Conditions ambient traffic growth (at a rate of 1.18 percent per year) and trips generated by the identified related projects. This analysis provides the baseline conditions by which Project impacts are evaluated at full buildout in 2022.

- Future Plus Project Conditions (2022)—This analysis identifies the potential incremental impacts of the Project at full buildout on projected future traffic operating conditions during the typical weekday A.M. and P.M. peak periods for all study intersections by adding the net Project-generated traffic to the Future Without Project traffic forecasts for the year 2022.

2. Environmental Setting

a. Regulatory Framework

(1) State

In September 2013, Governor Edmund G. "Jerry" Brown (Governor Brown) signed Senate Bill (SB) 743, which became effective on January 1, 2014. Among other provisions, SB 743 adds Public Resources Code (PRC) Section 21099, which provides that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." PRC Section 21099 defines a "transit priority area" as an area within 0.5 mile of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." PRC Section 21099 defines an employment center project as "a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area" and defines an infill site as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

The Project meets the PRC Section 21099 definition of an employment center project as a commercially zoned site with a proposed FAR of greater than 0.75:1 within a transit priority area (i.e., within 0.5 mile of the Long Beach Transit Mall (also referred to as the Long Beach Transit Gallery or the First Street Transit Gallery), which is served by the Metro Blue Line, as well as numerous bus lines); and meets the PRC Section 21099 definition of an infill site as a lot located within an urban area that has been previously developed. Therefore, pursuant to SB 743, the Project's parking impacts shall not be considered a significant impact on the environment as a matter of law. Notwithstanding the mandate imposed by SB 743, this Draft EIR includes a discussion of parking in terms of code requirements.

(2) Regional

(a) Los Angeles County Congestion Management Program

The Los Angeles County Congestion Management Program (CMP) is a State-mandated program enacted by the state legislature to address the increasing concern that urban congestion is affecting the economic vitality of the State and diminishing the quality of life in some communities. Within Los Angeles County, the Los Angeles County Metropolitan Transportation Authority (Metro) is responsible for planning and managing vehicular congestion and coordinating regional transportation policies. Metro prepared the *2010 Congestion Management Program for Los Angeles County*, in accordance with Section 65089 of the California Government Code. The CMP is intended to address vehicular congestion relief by linking land use, transportation, and air quality decisions. The program also seeks to propose transportation projects eligible to compete for state gasoline tax funds and to develop a partnership among transportation decision-makers to devise appropriate transportation solutions that include all modes of travel.

The CMP requires that new development projects analyze potential project impacts on CMP monitoring locations if an EIR is prepared for the project. The CMP project traffic impact analysis (TIA) guidelines require a traffic study to analyze traffic conditions at all CMP arterial monitoring intersections where a project will add 50 or more trips during either the A.M. or P.M. weekday peak hours of adjacent street traffic. If, based on this threshold, the traffic study identifies no facilities for study, no further traffic analysis is required.

The CMP's TIA guidelines also require a traffic study to analyze traffic conditions at all CMP mainline freeway monitoring locations where a project will add 150 or more trips in either direction during either A.M. or P.M. weekday peak hours. (A freeway mainline is the freeway segment between the ramps.) If, based on this criterion, a traffic study identifies no facilities for study, then no further traffic analysis is required.

Finally, the CMP requires that a transit system analysis be performed to determine whether a project adds ridership that exceeds the capacity of the transit system.

(b) Southern California Association of Governments 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 2016, the Southern California Association of Governments (SCAG) adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–

2040 RTP/SCS). The 2016–2040 RTP/SCS identifies mobility, accessibility, sustainability, and high quality of life as the principles that are most critical to the future of the region. Furthermore, it balances the region's future mobility and housing needs with economic, environmental, and public health goals. As stated in the 2016–2040 RTP/SCS, Senate Bill (SB) 375 requires SCAG and other Metropolitan Planning Organizations (MPOs) throughout the State to develop a Sustainable Communities Strategy to reduce per capita greenhouse gas emissions (GHG) through integrated transportation, land use, housing and environmental planning.[1] Within the 2016–2040 RTP/SCS, the overarching strategy includes plans for High Quality Transit Areas (HQTA), Livable Corridors, and Neighborhood Mobility Areas as key features of a thoughtfully planned, maturing region in which people benefit from increased mobility, more active lifestyles, increased economic opportunity, and an overall higher quality of life. HQTAs are described as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.[2] Local jurisdictions are encouraged to focus housing and employment growth within HQTAs.[3] The Project Site is located in an area anticipated to be a HQTA by 2040 as designated by the 2016–2040 RTP/SCS.[4,5]

(3) Local

(a) City of Long Beach General Plan

The Mobility Element of the City of Long Beach General Plan (Mobility Element) was last updated in October 2013 and describes the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, routes, and other local public utilizes and facilities. The Mobility Element, together with the Land Use and Urban Design Elements, is intended to create a unified system that links and integrates land use, mobility, and urban design principles and strategies.

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1 *SCAG, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 2016, p. 166.*

2 *SCAG, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 2016, p. 189.*

3 *SCAG, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, adopted April 2016, p. 76.*

4 *SCAG, 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, Exhibit 5.1: High Quality Transit Areas in the SCAG Region for 2040 Plan, adopted April 2016, p. 77.*

5 *Los Angeles County Metropolitan Transportation Authority. "High Quality Transit Areas—Southeast Quadrant."*

(b) City of Long Beach Municipal Code

(i) Construction Traffic

Chapter 8.80.202 of the Long Beach Municipal Code (LBMC) limits construction activities to occur between the hours of 7:00 A.M. and 7:00 P.M. on weekdays and from 9:00 A.M. to 6:00 P.M. on Saturdays and national holidays. No construction is permitted on Sundays.

(ii) Parking

As discussed above, pursuant to SB 743, the Project's parking impacts shall not be considered a significant impact on the environment as a matter of law. Notwithstanding the mandate imposed by SB 743, this Draft EIR includes a discussion of parking in terms of code requirements.

LBMC Chapter 21.41, *Off-Street Parking and Loading Requirements,* and the Downtown Shoreline Planned Development District (PD-6) Ordinance set forth parking requirements for development projects based on land use type(s) and floor area. As detailed therein, the proposed hotel use would require 0.75 spaces per room, the associated meeting space would require 20 spaces per 1,000 square feet, and the proposed restaurant would require 10 spaces per 1,000 square feet. However, as noted above, Fehr & Peers has prepared a shared parking study for the Project to determine the appropriate parking supply for the proposed land uses in consideration of the City's minimum parking requirements and the shared parking methodology developed by the Urban Land Institute (ULI). The Parking Memo is included as Appendix E.2 of this Draft EIR.

(iii) Transportation Improvement Fee

Pursuant to the requirements set forth in the LBMC, Transportation Improvement Fees would be required of the Project. For non-residential developments, the fee is based on the gross floor area. The precise fee would be determined by the City upon issuance of the Project's building permits. Collected fees are used for funding transportation improvements as defined in LBMC Chapter 18.17.100.

b. Existing Facilities

(1) Roadway System

(a) Streets and Highways

The Project Site is located in Downtown Long Beach and is bounded by East Ocean Boulevard to the north, the Convention Center Walkway and an office building to the east, East Seaside Way to the south, and Pine Avenue to the west.[6] Regional access to the Project Site is provided by Interstate 710 (I-710), while local access is provided by Ocean Boulevard, Pine Avenue, and Seaside Way. The roadway network in the vicinity of the Project Site is shown in Figure 2 in the Traffic Study included in Appendix E.1 of this Draft EIR. The following summarizes the roadways that provide access to the Project Site and are have the greatest potential to experience traffic impacts, if any, from the Project:

- Interstate 710—I-710, also known as the Long Beach Freeway, is a north-south highway that extends for 23 miles through Los Angeles County from Long Beach to Valley Boulevard just north of Interstate 10, near the boundary of the cities of Alhambra and Los Angeles. The number of lanes on I-710 varies between three and four travel lanes in each direction. South of Interstate 405 and nearest the Project Site, I-710 has three travel lanes in each direction. Access to the Project Site is provided via Ocean Boulevard, Broadway, and 3rd Street.

- Ocean Boulevard—Ocean Boulevard is an east-west roadway that forms the northern boundary of the Project Site. It is classified as both a Boulevard and Scenic Route according to the Mobility Element and provides three travel lanes in each direction between Pine Avenue and East Shoreline Drive The posted speed limit is 30 miles per hour (mph) and time restricted on-street parking is allowed on certain sections of the roadway adjacent to the Project Site and in the surrounding vicinity.

- Long Beach Boulevard—Long Beach Boulevard is a north-south roadway and has two travel lanes in each direction within the study area. It is classified as a Boulevard and the posted speed limit is 30 mph. On-street parking is permitted between Ocean Boulevard and 1st Street.

- Pacific Avenue—Pacific Avenue is a north-south roadway that provides two travel lanes in each direction between 7th Street and Ocean Boulevard. The posted speed limit is 30 mph and on-street parking is permitted on both sides of

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6 *Although Ocean Boulevard is officially named East Ocean Boulevard east of Pine Avenue and West Ocean Boulevard west of Pine Avenue, and Seaside Way is named East Seaside Way east of Pine Street and West Seaside Way west of Pine Street, the general names Seaside Way and Ocean Boulevard ares used herein except where a distinction is needed based on specific locations or routes.*

the roadway within the vicinity of the Project Site. It is classified as a Major Avenue.

- Pine Avenue—Pine Avenue is a north-south roadway that provides one travel lane in each direction between Ocean Boulevard and 3rd Street. Between 3rd Street and 7th Street, a center left turn lane is provided. On-street parking is permitted on both sides of the roadway within the vicinity of the Project Site. It is classified as a Local Street in the Mobility Element.

- Shoreline Drive—Shoreline Drive is an east-west roadway classified as a Boulevard in the Mobility Element. The roadway provides three travel lanes in the west direction and two in the east between Queens Way and Shoreline Village Drive. Between Shoreline Village Drive and Ocean Boulevard, it provides three travel lanes in each direction. The posted speed limit is 40 mph and on-street parking is provided between Pine Avenue and Shoreline Village Drive near the Convention Center Walkway.

- Magnolia Avenue—Magnolia Avenue is a north-south roadway classified in the Mobility Element as a Major Avenue between Ocean Avenue and 3rd Street and a Minor Avenue between 3rd Street and Pacific Coast Highway (PCH). The roadway provides two travel lanes in each direction between Ocean Boulevard and Broadway. From Broadway to 3rd Street, there are two lanes in the south direction and one in the north direction. The roadway then transitions into one lane in each direction with left turn pockets at different segments. The posted speed limit is 25 mph and on-street parking is permitted on both sides of the roadway within the vicinity of the Project Site.

- Seaside Way—Seaside Way is an east-west roadway that provides two lanes in the east direction and one in the west from Pine Avenue to Cedar Avenue. Thereafter, the roadway provides two lanes in the west direction and one in the east, with center left turn lanes and terminates at Golden Shore. Parking is allowed on both sides of the road between Pine Avenue and Queens Way. The posted speed limit is 25 mph and it is classified as a Port-Related Street in the Mobility Element.

- Alamitos Avenue—Alamitos Avenue is a north-south roadway classified as a Boulevard. The roadway provides two travel lanes in each direction between Broadway and 7th Street. The posted speed limit is 30 mph and on-street parking is permitted on both sides of the roadway near the Project Site.

- Broadway—Broadway is a one-way roadway that provides three travel lanes in the eastbound direction between Shoreline Drive and Pine Avenue. On-street parking is permitted between Magnolia Avenue and Pine Avenue. Broadway is classified as a Major Avenue in the Mobility Element and the posted speed limit is 30 mph.

- 3rd Street—3rd Street is a one-way roadway that provides two travel lanes in the westbound direction between Long Beach Boulevard and Golden Avenue. The posted speed limit is 25 mph and on-street parking is permitted within the vicinity of the Project Site. 3rd Street is classified as a Major Avenue between Magnolia Avenue and Alamitos Avenue in the Mobility Element.

- 4th Street—4th Street is an east-west roadway that provides one travel lane in each direction between Alamitos Avenue and Golden Avenue. The posted speed limit is 25 mph and on-street parking is permitted on both sides of the roadway near the Project Site. 4th Street is classified as a Minor Avenue in the Mobility Element.

- 6th Street—6th Street provides one travel lane in the eastbound and westbound direction between Alamitos Avenue and Atlantic Avenue, and transitions into a one way roadway with three travel lanes in the eastbound direction between Magnolia Avenue and Long Beach Boulevard. The posted speed limit is 30 mph and on-street parking is permitted on both sides of the roadway between Magnolia Avenue and Atlantic Avenue. 6th Street is classified as a Local Street in the Mobility Element.

- 7th Street—7th Street provides three travel lanes in the westbound direction between Magnolia Avenue and Atlantic Avenue, and two travel lanes in each direction between Atlantic Avenue and Alamitos Avenue. The posted speed limit is 35 mph and parking is permitted on both sides of the roadway between Atlantic Avenue and Magnolia Avenue. 7th Street is classified as a Boulevard in the Mobility Element.

(b) Congestion Management Program Facilities

The CMP intersections in the study area are Alamitos Avenue and 7th Street and East Shoreline Drive/Alamitos Avenue and Ocean Boulevard. As discussed further below, the Project would not impact these CMP intersections.

(2) Pedestrian Facilities

Pedestrian facilities in the study area include sidewalks, crosswalks, and pedestrian signals. The Convention Center Walkway provides direct access between the Project Site and the Long Beach Convention & Entertainment Center. The main streets that provide access to the Project Site include Pine Avenue, Ocean Boulevard, Seaside Way, Long Beach Boulevard, and Pacific Avenue. These roadways have well-connected and maintained sidewalk networks near the Project. Sidewalks are provided on both sides of these streets. At the signalized intersections in the area, crosswalks and pedestrian push-button actuated signals are provided.

(3) Bicycle Facilities

The City has an extensive network of bicycle facilities consisting of 15 miles of bike routes, 19 miles of bike lanes, and 29 miles of bike paths. In addition to the on-street bicycle network, the City has over 60 miles of off-street bike and pedestrian paths within its boundaries. City bicycle facilities include Class I bikeways (off-street and separated from automobiles), Class II bikeways (striped lanes), Class III bikeways (streets with shared use), and Class IV bikeways (cycle tracks). Within the study area, Class I bikeways are provided along Shoreline Drive; Class II bike lanes can be found on 4th, 6th, and 7th Streets; and Pacific Avenue and Alamitos Avenue have Class III bike routes. Further, in 2011, the City installed two one-way cycle tracks (Class IV) on Broadway and 3rd Street. These bikeways provide one-way bikeways along the left side of each street, separated from traffic by a parking lane and a raised curb. The City's existing bikeway network is shown on Figure 6 in the Traffic Study. In addition, the planned "Complete Streets" road diet along Alamitos Avenue, discussed further below, will add bicycle lanes in both directions.

With regard to the immediate Project area, there are no existing bike routes adjacent to the Project Site, nor are any currently proposed or funded. However, there are existing bike lanes on Seaside Way that terminate eastbound at Pine Avenue. Additionally, the 2017 Long Beach Bicycle Master Plan recommends future Class I or Class IV bicycle facilities along Pine Avenue and Ocean Boulevard.

The City launched Long Beach Bike Share in March 2016 as part of its effort to enhance mobility and bicycle infrastructure. This bike share program currently has 400 bikes and 60 stations in operation, including a station on the Project Site. Additional bike share stations in the Project vicinity are located on Shoreline Drive, Ocean Boulevard, 1st Street, 3rd Street, 4th Street, Atlantic Avenue, Long Beach Boulevard, Broadway, Pacific Avenue, and Pine Avenue.

(4) Public Transit

(a) Metro Blue Line

The City is served by the Metro Blue Line which travels from Downtown Long Beach to 7th Street/Metro Center in Los Angeles. The station nearest the Project Site is the Downtown Long Beach Station. On weekdays, there are variable headways of about 5 to 10 minutes from 3:51 A.M. to 1:38 A.M. in the northbound direction and 4:15 A.M. to 2:05 A.M. in the southbound direction. On weekends and holidays, there are variable headways from 3:51 A.M. until about midday and 12-minute headways from 12:16 P.M. to 1:38 A.M. in the northbound direction. In the southbound direction, there are variable headways from 4:16 A.M. to 12:08 P.M., and 12-minute headways from 12:34 A.M. to 2:28 A.M. On Fridays and Saturdays, trains operate late until about 3:00 A.M. Additional Metro Blue Line stops within the Project vicinity are located on Pacific Avenue and 1st Street. These Metro Blue Line stops are shown on Figure 7 in the Traffic Study.

(b) Bus Transit

Long Beach Transit (LBT) provides fixed and flexible bus transit services within the City of Long Beach and in other communities in south and southeast Los Angeles County, as well as northwestern Orange County. LBT also operates the Passport shuttle, Aquabus, and Aqualink. Bus stations are located at the following locations within the Project vicinity: City Place, Downtown Long Beach Station, The Pike at Rainbow Harbor, Long Beach Convention and Entertainment Center, Long Beach Aquarium of the Pacific, Shoreline Park, and Shoreline Village. LBT Routes that serve areas closest to the Project Site include the following:

- Route 51: This route operates daily via Long Beach Boulevard.
- Route 52: This route operates on weekdays only via Long Beach Boulevard.
- Route 91, 94: These routes operate daily via 7th Street.
- Route 92, 93: These routes operate on weekdays only via 7th Street.
- Route 96 ZAP: This route operates via 7th Street during weekday rush hours only in the peak direction; eastbound in the A.M. and westbound in the P.M.
- Routes 111, 112: These routes operate daily via Broadway.
- Routes 111, 112: These routes operate daily via Magnolia Avenue and Pacific Avenue.
- Route 121: This route operates daily via Ocean Boulevard.

These routes are shown on Figure 8 in the Traffic Study. The nearest bus stops to the Project Site are located on Ocean Boulevard at Pine Avenue and on Pine Avenue at Seaside Way.

The City also offers a free shuttle service in Downtown Long Beach. The service is provided by The Free Ride and offers transportation around the downtown area using gas-free, electric vehicles. The Free Ride offers free transport anywhere within its designated travel zone (5th Street to the north, Alamitos Avenue to the east, Shoreline Drive to the south, and I-710 to the west). Users can request a pick-up from anywhere within the shuttle's travel zone by using The Free Ride application. The free shuttle operates daily

Sunday through Wednesday from 10:00 A.M. to 10:00 P.M., and Thursday through Saturday from 11:00 A.M. to 11:00 P.M.

(5) Project Site

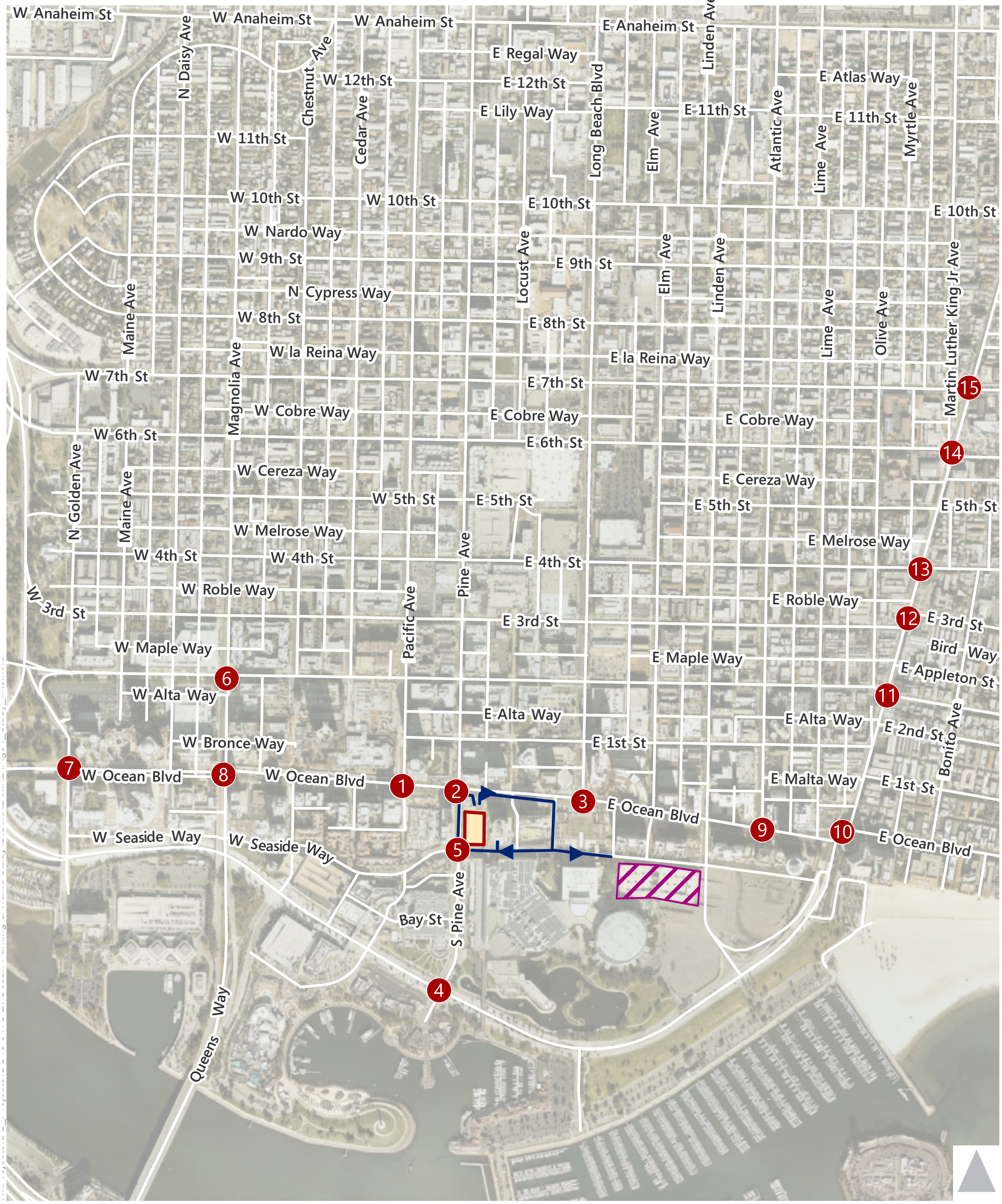
The majority of the Project Site is currently developed with a surface parking lot, consisting of 80 vehicular parking spaces and an automated pay station. There are no habitable structures or landscaping within the parking lot, and concrete retaining walls line the northern and eastern site boundaries. Access to the southern end of the subterranean Jergins Trust Tunnel is sealed at the northern retaining wall. The northern part of the Project Site includes a portion of Victory Park, which currently houses a temporary public art project known as "The Loop," along with seating areas and landscaping. As previously indicated, a Long Beach Bike Share station is located at the northwestern corner of the Project Site. In addition, a single ingress/egress driveway is located along Seaside Way.

c. Existing Traffic Conditions

(1) Analyzed Intersections

Fifteen signalized intersections that provide both regional and local access to the Project Site were analyzed for the A.M. and P.M. peak periods on weekdays. The 15 study intersections are listed below and the locations of the study intersections are shown in Figure IV.E-1 on page IV.E-12:

- Intersection No. 1: Pacific Avenue & Ocean Boulevard
- Intersection No. 2: Pine Avenue & Ocean Boulevard
- Intersection No. 3: Long Beach Boulevard & Ocean Boulevard
- Intersection No. 4: Pine Avenue & Shoreline Drive
- Intersection No. 5: Pine Avenue & Seaside Way
- Intersection No. 6: Magnolia Avenue & Broadway
- Intersection No. 7: Golden Shore (I-710 Access) & Ocean Boulevard
- Intersection No. 8: Queens Way/Magnolia Avenue & Ocean Boulevard
- Intersection No. 9: East Shoreline Drive/Alamitos Avenue & Ocean Boulevard
- Intersection No. 10: Alamitos Avenue/Shoreline Drive & Ocean Boulevard



Study Intersection

Project Site (100 E. Ocean Blvd)

Valet Route

Off-Site Parking (300 Seaside Way)

eyestone ENVIRONMENTAL

Figure IV.E-1
Analyzed Intersections

Source: Fehr & Peers, 2019.

- Intersection No. 11: Alamitos Avenue & Broadway
- Intersection No. 12: Alamitos Avenue & 3rd Street
- Intersection No. 13: Alamitos Avenue & 4th Street
- Intersection No. 14: Alamitos Avenue & 6th Street
- Intersection No. 15: Alamitos Avenue & 7th Street

(2) Existing Conditions Methodology

(a) Signalized Intersections

(i) Intersection Capacity Utilization

In consultation with the City and in conformance with Los Angeles County CMP requirements, existing traffic levels at the analyzed signalized intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology, which estimates volume-to-capacity (V/C) ratios on a critical movement basis. The overall intersection V/C ratio is subsequently assigned a level of service (LOS) value to describe intersection operations. LOS is a qualitative measure used to describe traffic flow conditions. Table IV.E-1 on page IV.E-14 defines the ranges of V/C ratios and their corresponding levels of service. LOS definitions for signalized intersections range from excellent, nearly free-flow traffic at LOS A to stop-and-go conditions at LOS F.

(ii) CMP Guidelines

Based on the Los Angeles CMP guidelines, the following parameters were assumed in the traffic analysis:

- Through lane capacities of 1,600 vehicles per hour per lane;
- Turn lane capacities of 1,600 vehicles per hour per lane (2,880 vehicles per hour was used for dual left-turn lanes); and
- A clearance interval reduction of 0.1 was applied consistent with those documented in the City of Long Beach TIA Guidelines.

(3) Existing Intersection Levels of Service

The existing intersection peak-hour traffic volumes during the weekday A.M. and P.M. peak periods are illustrated in Figure 9 of the Traffic Study. Table IV.E-2 on page IV.E-15 summarizes the existing weekday A.M. and P.M. peak-hour V/C ratio for signalized

Table IV.E-1
Intersection Level of Service Criteria

Level of Service	Signalized Delay (seconds)	Description
A	0.000–0.600	Operations with very low delay occurring with favorable progression and/or short cycle length.
B	0.601–0.700	Operations with low delay occurring with good progression and/or short cycle lengths.
C	0.701–0.800	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.
D	0.801–0.900	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and individual cycle failures are noticeable.
E	0.901–1.000	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.
F	> 1.000	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.

Source: Fehr & Peers, 2019.

intersections, as well as the corresponding LOS for each of the study intersections. As shown therein, all study intersections operate at LOS D or better except for Intersection No. 10, Alamitos Avenue/Shoreline Drive and Ocean Boulevard, during the P.M. peak hour (LOS E).

d. Future Without Project Traffic Conditions

(1) Future Without Project Conditions Methodology

The traffic volumes projected for the Future Without Project Conditions take into account the expected changes in traffic relative to Existing Conditions from two primary sources: traffic generated by specific development projects in, or in the vicinity of, the study area as well as ambient growth in traffic volumes due to the effects of overall regional growth and development outside the study area. These factors are described further below.

(a) Ambient Growth

Cumulative traffic growth estimates have been calculated using an ambient growth factor. The ambient traffic growth factor is intended to include future, unknown

Table IV.E-2
Existing Intersection Level of Service

No.	Intersection	Peak Hour	Existing V/C	Existing LOS
1	Pacific Avenue and Ocean Boulevard	A.M.	0.499	A
		P.M.	0.491	A
2	Pine Avenue and Ocean Boulevard	A.M.	0.511	A
		P.M.	0.674	B
3	Long Beach Boulevard and Ocean Boulevard	A.M.	0.577	A
		P.M.	0.497	A
4	Pine Avenue and Shoreline Drive	A.M.	0.387	A
		P.M.	0.464	A
5	Pine Avenue and Seaside Way	A.M.	0.277	A
		P.M.	0.294	A
6	Magnolia Avenue & Broadway	A.M.	0.481	A
		P.M.	0.592	A
7	Golden Shore (I-710 Access) & Ocean Boulevard	A.M.	0.474	A
		P.M.	0.61	B
8	Queens Way/Magnolia Avenue & Ocean Boulevard	A.M.	0.575	A
		P.M.	0.654	B
9	E. Shoreline Dr/Alamitos Ave & Ocean Boulevard	A.M.	0.573	A
		P.M.	0.531	A
10	Alamitos Avenue/Shoreline Drive & Ocean Boulevard	A.M.	0.704	C
		P.M.	**0.904**	**E**
11	Alamitos Avenue & Broadway	A.M.	0.609	B
		P.M.	0.738	C
12	Alamitos Avenue & 3rd Street	A.M.	0.616	B
		P.M.	0.474	A
13	Alamitos Avenue & 4th Street	A.M.	0.731	C
		P.M.	0.735	C
14	Alamitos Avenue & 6th Street	A.M.	0.627	B
		P.M.	0.695	B
15	Alamitos Avenue & 7th Street	A.M.	0.756	C
		P.M.	0.782	C

*Intersection operations below acceptable LOS D are shown in **bold**.*
Source: Fehr & Peers, 2019.

development that may occur within the study area, as well as regular growth in traffic volumes due to new development outside the study area. Therefore, use of the ambient traffic growth factor conservatively accounts for cumulative impacts in addition to analyzing the specific related projects listed in Section III, Environmental Setting, of this Draft EIR. In consultation with the City of Long Beach, an ambient growth factor of 1.18 percent per year was applied to adjust the existing traffic volumes to reflect the effects of regional growth and development by the year 2022 (i.e., the Project build out year).

(b) Related Projects

The analysis considers the effects of other known development proposals, referred to as related projects, either proposed, approved, or under construction in the study area. The list of related projects was obtained from information provided by the Cities of Long Beach and Seal Beach. A total of 57 related projects were identified in the study area, as listed in Table III-1 in Section III, Environmental Setting, of this Draft EIR. The locations of the related projects are shown in Figure III-1 therein. To develop the estimated traffic volumes to add to the study area as a result of these related projects, the analysis considers trip generation, trip distribution, and trip assignment, as discussed below.

(i) Trip Generation

Trip generation estimates for the related projects were calculated using a combination of previous study findings and the trip generation rates contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition*.[7] Table 5 in the Traffic Study contained in Appendix E.1 of this Draft EIR summarizes the related project trip generation for typical weekday A.M. and P.M. peak periods.

(ii) Trip Distribution

The geographic distribution of traffic generated by the related projects is dependent on several factors, including the type and density of the proposed land uses, the anticipated geographic distribution of the population from which the employees and potential patrons of the proposed developments are or will be drawn, and the location of these projects in relation to the surrounding street system. These factors are considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

(iii) Trip Assignment

The trip generation estimates for the related projects were assigned to the local street system considering the trip distribution pattern described above. The traffic volumes of the related projects were then added to the existing traffic volumes after adjustment for

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7 *Institute of Transportation Engineers, 2017.*

ambient growth through the projected buildout year of 2022. These volumes represent Future Without Project Conditions (i.e., existing traffic volumes + ambient traffic growth + related project traffic).

(2) Future Roadway Improvements

In addition to ambient growth and related projects in the area, the analysis of Future Without Project Conditions considers roadway improvements that are reasonably expected to be implemented in the study area based on input from the City. A major planned improvement in the study area is a “Complete Streets” road diet along Alamitos Avenue, which will reduce vehicular capacity at Intersection Nos. 10 through 13. The road diet will reduce the number of through lanes from two in each direction to one in each direction and will add parking and bicycle lanes in both directions. This capacity reduction was considered in developing the trip distribution for the related projects and the Project.

(3) Future Without Project Intersection Levels of Service

Table IV.E-3 on page IV.E-18 summarizes the weekday A.M. and P.M. peak-hour V/C ratios for signalized intersections, the peak-hour delay for the unsignalized intersections, and the corresponding LOS for each of the study intersections under Future Without Project Conditions. As shown therein, 11 of the 15 study intersections are projected to operate at LOS D or better during both the A.M. and P.M. peak hours. The following remaining four intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours under Future Without Project Conditions:

- Intersection No. 10: Alamitos Avenue/Shoreline Drive & Ocean Boulevard (LOS F—P.M.)
- Intersection No. 11: Alamitos Avenue & Broadway (LOS F— P.M.)
- Intersection No. 13: Alamitos Avenue & 4th Street (LOS F—P.M.)
- Intersection No. 15: Alamitos Avenue & 7th Street (LOS E—P.M.)

Table IV.E-3
Intersection Levels of Service—Future Without Project Conditions

	Intersection	Control	Peak Hour	Future Without Project Conditions	
				ICU/HCM	LOS
1.	Pacific Ave. and Ocean Blvd.	Signal	A.M. P.M.	0.547 0.547	A A
2.	Pine Ave. and Ocean Blvd.	Signal	A.M. P.M.	0.550 0.721	A C
3.	Long Beach Blvd. and Ocean Blvd.	Signal	A.M. P.M.	0.626 0.543	B A
4.	Pine Ave. and Shoreline Dr.	Signal	A.M. P.M.	0.409 0.491	A A
5.	Pine Ave. and Seaside Way	Signal	A.M. P.M.	0.321 0.356	A A
6.	Magnolia Ave. & Broadway	Signal	A.M. P.M.	0.602 0.863	B D
7.	Golden Shore (I-710 Access) & Ocean Blvd.	Signal	A.M. P.M.	0.583 0.751	A C
8.	Queens Way/Magnolia Ave. & Ocean Blvd.	Signal	A.M. P.M.	0.674 0.734	B C
9.	Atlantic Ave. & Ocean Blvd.	Signal	A.M. P.M.	0.615 0.577	B A
10.	Alamitos Ave./Shoreline Dr. & Ocean Blvd.	Signal	A.M. P.M.	0.772 **1.046**	C **F**
11.	Alamitos Ave. & Broadway	Signal	A.M. P.M.	0.707 **1.090**	C **F**
12.	Alamitos Ave. & 3rd St.	Signal	A.M. P.M.	0.847 0.773	D C
13.	Alamitos Ave. & 4th St.	Signal	A.M. P.M.	0.860 **1.121**	D **F**
14.	Alamitos Ave. & 6th St.	Signal	A.M. P.M.	0.716 0.818	C D
15.	Alamitos Ave. & 7th St.	Signal	A.M. P.M.	0.838 **0.924**	D **E**

Intersection operations below acceptable LOS D are shown in ***bold****.*
Source: Fehr & Peers, 2019.

3. Environmental Impacts

a. Methodology

The methodology and base assumptions used in this analysis were established in consultation with the City of Long Beach and in accordance with and Los Angeles County

CMP requirements, as applicable. This analysis addresses a wide range of issues including, but not limited to, the following:

- Construction: an analysis of the potential temporary impacts on traffic, access, and transit resulting from the Project's construction activities;
- Intersections: an analysis of the potential changes in operating conditions at the 15 study intersections identified within the traffic study area;
- Regional Transportation System: an analysis of potential impacts along the nearest CMP arterial monitoring stations and mainline freeway monitoring location;
- Transit: an analysis of potential impacts on the capacity of transit lines serving the Project Site; and
- Project Site Access: an analysis of potential impacts associated with access to and from the Project Site by automobiles, bicyclists, and pedestrians.

(1) Construction Impacts

In order to forecast the potential vehicular trips associated with construction activities at the Project Site, a set of construction assumptions were established for each phase of construction, including demolition, excavation, building construction, architectural coatings, and paving. Project construction activities are estimated to occur over a 30-month period. The construction-related peak-hour and daily traffic volumes for each of the primary phases of construction were then forecasted using the established construction assumptions.

(2) Operational Impacts

The relative impact of the added traffic volumes generated by the Project was evaluated based on analysis of operating conditions at the study intersections, both with and without the Project. As required by CEQA, the Project's impacts were evaluated against existing (2018) and future (2022) traffic conditions. The following discussion describes the components of the Project's operational traffic impact analysis.

(a) Intersection Level of Service Methodology

The existing and future traffic volumes at the signalized study intersections were evaluated primarily using ICU methodology, which, as discussed above, determines V/C ratios on a critical movement basis. The overall intersection V/C ratio is subsequently assigned an LOS value to describe intersection operations. Table IV.E-1 on page IV.E-14 defines the ranges of V/C ratios and their corresponding levels of service. LOS definitions for signalized intersections range from excellent, nearly free-flow traffic at LOS A to stop-and-go conditions at LOS F. In order to estimate the traffic impact characteristics of the Project, the Traffic Study analyzes Project trip generation, distribution, and assignment, as described below.

(i) Project Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the local roadway network. For this analysis, trip generation was estimated for typical weekday A.M. and P.M. peak hours based on the most recently published rates in the ITE *Trip Generation Manual, 10th Edition*, with an adjustment for both restaurant/bar pass-by trips and internalization/walking trips.

Although restaurant uses are typically already accounted for in the ITE Code 310 (Hotel), to provide a conservative analysis, the restaurant space was considered separately. In actuality, the proposed restaurant/bar is expected to primarily serve hotel guests and Convention Center patrons who would not generate new vehicle trips to the Project Site; these guests would already be on-site or walk from the Convention Center. In calculating restaurant/bar-related trips, a 25 percent internal trip credit was applied based on the recommended factors in the *National Cooperative Highway Research Program 8-51 Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. A 25 percent pass-by credit was also applied to account for patrons visiting the restaurant/bar who would already be using Ocean Boulevard and therefore would not generate new trips on the roadway.

In addition, a total of 25 percent of peak-hour trips were assumed to be made by ridesharing and on-demand transportation services such as Uber and Lyft. This assumption is based on the urban location of the Project Site, the proposed land uses, and the movement towards a shared economy transportation system. This practice would reduce the number of trips using the valet service, therefore affecting operations at Intersection Nos. 2 and 5. The Project's trip generation forecast did not assume a transit credit and is therefore conservative with respect to the vehicular intersection analysis.

As summarized in Table IV.E-4 on page IV.E-21, after accounting for pass-by trips and internal capture associated with the restaurant/bar, the Project is expected to generate approximately 4,906 daily trips, 320 A.M. peak-hour trips, and 372 P.M. peak-hour trips.

Table IV.E-4
Vehicle Trip Generation for 100 E. Ocean Boulevard

Land Use	Daily	A.M. Peak Hour			P.M. Peak Hour		
		Inbound	Outbound	Total	Inbound	Outbound	Total
Proposed Uses							
Hotel[a]	3,586	119	83	202	131	126	257
Restaurant/Bar	2,638	129	105	234	143	87	230
Restaurant/Bar Pass-By Reduction (-25%)	*(659)*	*(32)*	*(26)*	*(58)*	*(35.5)*	*(22)*	*(57.5)*
Restaurant/Bar Internalization (-25%)	*(659)*	*(32)*	*(26)*	*(58)*	*(35.5)*	*(22)*	*(57.5)*
Total Project Trips	**4,906**	**184**	**136**	**320**	**203**	**169**	**372**

rm = room

ksf = 1,000 square feet

[a] The ITE Trip Generation Manual, 10th Edition considers banquet space as part of the hotel land use and only requires the number of rooms to determine the resulting trip generation.

Source: ITE Trip Generation Manual, 10th Edition, 2017; and Fehr & Peers, 2019.

(ii) Project Trip Distribution and Assignment

The trip distribution and assignment process is used to estimate how the trips generated by a project would be distributed across the roadway network. The Project's trip distribution was developed based on Census Longitudinal Employer-Household Dynamics data and the traffic consultant's knowledge of the study area. Different ingress and egress values were determined based on the valet service being accessible through a right-in/right-out driveway as well as freeway on- and off-ramps located along different local roadways. The resulting trip distribution is depicted in Figure 3 of the Traffic Study. As shown therein, all inbound trips were assumed to access the Project Site at the west driveway loop on Ocean Boulevard and would then be valeted out of the east driveway onto eastbound Ocean Boulevard, turn south on Collins Way, and then either turn west on Seaside Way and terminate at the Project garage, or turn east on Seaside Way and terminate at the off-site garage. All outbound trips were assumed to originate at the Project garage or off-site garage, from where they would be valeted west on Seaside Way, north on Pine Avenue, and then east on Ocean Boulevard to access the west driveway. Outbound trips would exit the east driveway loop and turn east on Ocean Boulevard, from which the local street network could be accessed. However, it was assumed all vehicle trips would be valeted to the Project's on-site parking garage as a conservative measure (i.e., assuming all vehicles would be parked in a single location would yield the greatest impact on the immediately surrounding intersections). The trips generated by Project guests are shown on Figure 4 of the Traffic Study and the trips generated by the Project valet service are shown on Figure 5 of the Traffic Study.

(b) Regional Transportation System

(i) Congestion Management Plan

The potential impacts of the Project on CMP monitoring stations and freeways were analyzed in accordance with the CMP's TIA guidelines. In order to address the potential for regional traffic impacts, the number of peak-hour Project trips was added to the CMP monitoring locations and freeways in the Project vicinity to determine whether these volumes exceed the CMP thresholds of 150 vehicles per hour for freeway segments or 50 vehicle trips per hour for arterial monitoring stations. If the Project traffic volumes are not found to exceed the CMP screening thresholds, no further analysis is required.

(c) Public Transit

Appendix D-8 of the 2010 CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the number of vehicle trips. This methodology assumes an average vehicle occupancy factor of 1.4 in order to estimate the number of person trips to and from a project. The CMP provides guidelines regarding the percentage of person trips assigned to public transit depending on the type of use (i.e., commercial/other versus residential) and the proximity to transit services. CMP Appendix D-8 recommends summarizing the fixed-route local bus services within 0.25-mile of a project site and express bus routes and rail service within two miles of a project site. A determination was then made as to whether existing transit lines could accommodate the Project's transit demand pursuant to the thresholds of significance defined below.

(d) Access and Circulation

The analysis of the Project's potential access impacts included a review of the proposed vehicular access points and internal circulation. A determination was made regarding the potential for these features to impede traffic flows on adjacent City streets and/or result in potential safety impacts.

(e) Bicycle, Pedestrian, and Vehicular Safety

The methodology for the analysis of pedestrian/bicycle safety impacts includes a review of the Project's access and circulation scheme and a determination of whether the Project would substantially increase the potential for pedestrian/vehicle and/or bicycle/vehicle conflicts or impact existing pedestrian and bicycle facilities in the surrounding area.

(f) Parking

As previously discussed, LBMC Chapter 21.41 and the PD-6 Ordinance set forth parking requirements for development projects based on land use type(s) and floor area. As detailed therein, the proposed hotel use would require 0.75 spaces per room, the associated meeting space would require 20 spaces per 1,000 square feet, and the proposed restaurant would require 10 spaces per 1,000 square feet. As noted above, the Parking Memo, prepared by Fehr & Peers and included as Appendix E.2 of this Draft EIR, evaluates the parking demands and operational needs of the Project by identifying the worst-case peak temporal demand on the Project Site assuming full occupancy at the hotel and ancillary uses. The methodology assumed therein was developed by the Urban Land Institute (ULI).

b. Thresholds of Significance

(1) CEQA Guidelines Appendix G

Appendix G of the CEQA Guidelines provides thresholds of significance to assess if a project could have a potential significant impact on the environment with regard to transportation/traffic. These thresholds of significance are as follows:

Would the project:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

- Conflict with an applicable congestion management program including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

- Result in inadequate emergency access?

- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

A preliminary analysis of the Project's potential transportation/traffic impacts was conducted relative to the above thresholds to determine whether or not further analysis would be warranted in an EIR. That analysis was published in an Initial Study for the Project, which is included as Appendix A of this Draft EIR. As evaluated therein, the Project Site is not located within the vicinity of a public or private airport or planning boundary of any airport land use plan. In addition, the Project's approximately 375.5-foot tall building would be similar to nearby buildings in downtown and would not increase or change air traffic patterns, nor increase levels of risk with respect to air traffic. Additionally, the roadways adjacent to the Project Site are part of the urban roadway network and contain no sharp curves or dangerous intersections. The Project does not include any major modifications to the street system or any dangerous design features. In addition, the Project would not result in incompatible uses, as the proposed uses are consistent with other commercial uses in the Project vicinity. Thus, no impacts related to increased hazards due to a design feature or incompatible use would occur. The Project would not place any permanent physical barriers on any of the existing surrounding streets, and access along and through streets in the area would be maintained. Therefore, as evaluated in the Initial Study, impacts regarding emergency access would be less than significant. Accordingly, no further analysis regarding the significance thresholds related to changes in air traffic patterns, hazardous design features, or inadequate emergency access is provided below.

(2) City of Long Beach

In addition to the above thresholds of significance from CEQA Guidelines Appendix G, a significant impact would occur at a signalized study intersection when Project-related traffic causes:

- A signalized intersection to degrade from an acceptable LOS D or better to LOS E or LOS F; or

- The volume to capacity (V/C) ratio to increase by 0.02 or more at a signalized intersection operating at LOS E or LOS F; or

- Adds traffic to an unsignalized intersection operating at an unacceptable LOS E or LOS F such that is satisfies the Manual on Uniform Traffic Control Devices Peak Hour Volume Warrant for traffic signalization.

With respect to parking, as noted above, the Project's parking impacts are not considered a significant impact pursuant to SB 743. Nevertheless, the Project would be required to provide parking pursuant to LBMC Chapter 21.41 and the Downtown Shoreline PD-6 Ordinance. As previously discussed, the Parking Memo provided in Appendix E.2 of this Draft EIR determines the recommended parking for the proposed land uses in consideration of the City's minimum parking requirements and the shared parking methodology developed by the ULI.

c. Project Design Features

In addition to the Project characteristics and improvements described in Section II, Project Description, of this Draft EIR, the Project would implement the following specific project design features regarding transportation/traffic:

Project Design Feature TRA-1: Prior to the start of construction, the Project Applicant shall prepare a detailed Construction Traffic Management Plan, including haul routes and a staging plan, and submit it to the City of Long Beach Department of Public Works, Traffic and Transportation Bureau for review and approval. The Construction Traffic Management Plan shall formalize how construction would be carried out and identify specific actions to reduce resulting effects on the surrounding community. The Construction Traffic Management Plan shall be based on the nature and timing of the specific construction activities and shall include, but not be limited to, the following elements, as appropriate:

- Traffic control for any street/lane closure, detour, or other disruption to traffic circulation.
- Identify the routes that construction vehicles would utilize for the delivery of construction materials (i.e. lumber, tiles, piping, windows, etc.), to access the Project Site, traffic controls and detours, and proposed construction phasing plan for the Project.
- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets.
- Require the Applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The Applicant shall clean adjacent streets, as directed by the City Engineer (or representative of the City Engineer), of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.
- Hauling or transport of oversize loads shall be allowed between the hours of 9:00 A.M. and 3:00 P.M. only, Monday through Friday,

unless approved otherwise by the City Engineer. No hauling or transport of oversize loads shall be allowed during nighttime hours, weekends or federal holidays.

- Haul trucks entering or exiting public streets shall at all times yield to public traffic.
- Construction-related parking and staging of vehicles shall occur on-site to the extent possible, but may occur on nearby public and/or private parking lots/garages, as approved by the City Engineer.
- Appropriate signage and facilities shall be installed to ensure safety and direct pedestrians in the event of any temporary sidewalk closure or the temporary relocation of any bus stop.
- The Construction Traffic Management Plan shall meet standards established in the current *California Manual on Uniform Traffic Control Device (MUTCD)* as well as City of Long Beach requirements.

Project Design Feature TRA-2: In compliance with LBMC Section 21.64.030(B) 1, 2, and 3, the Project shall implement transportation demand management (TDM) measures to reduce vehicle trips and encourage the use of public transit and other alternative modes of transportation. These measures shall include, but not be limited to: bicycle parking, bicycle rental, end-of-trip bicycle facilities, an active transportation-oriented ground floor, wayfinding signage, car share parking, car share membership, guaranteed ride home program, pre-loaded transit cards/bike share passes, unbundled parking, hotel confirmation with multi-modal information, in-room information regarding transportation options, website transit and commute information, and designation of a Transportation Coordinator. Details of the proposed TDM Plan are set forth in *100 E. Ocean Boulevard Transportation Demand Management Plan* prepared by Fehr & Peers, provided in Appendix E.3 of the Draft EIR.

In accordance with the LBMC, the Project Applicant also would be required to pay a Transportation Improvement Fee. The fee will be determined by the City upon issuance of Project building permits.

d. Analysis of Project Impacts

(1) Construction Impacts

Potential traffic impacts from Project construction activities could occur as a result of the following types of activities:

- Truck traffic associated with export or import of fill materials and delivery of construction materials;
- Automobile traffic associated with construction workers traveling to and from the Project Site;
- Reductions in existing street capacity from temporary lane closures necessary for the construction of access improvements, utility connections, and drainage facilities; and
- Blocking existing vehicle or pedestrian access to other parcels fronting streets.

The following discussion addresses these potential impacts based on the construction characteristics of the Project. As described above, a set of construction assumptions were established for each phase of construction, including demolition, excavation, building construction, architectural coatings, and paving. As discussed further below, the excavation and grading phase is estimated to generate the greatest amount of construction-related traffic during daytime hours. As such, the construction analysis considered the peak haul trips and construction worker trips during this phase.

(a) Construction Trip Generation and Traffic Impacts

An estimated 180 haul truck trips (round trips) per day would occur during the excavation and grading phase of construction.[8] Given typical construction hours of 7:00 A.M. to 3:30 P.M., an average of 21.2 trucks per hour would contribute traffic on local roadways. Using a passenger car equivalent of 3.0, these 21.2 trucks would yield the equivalent of 64 passenger car trips per hour in each direction. Thus, a total equivalent of 128 inbound and outbound passenger car trips per hour would result.

All construction traffic was assumed to enter and exit the study area via I-710. Trucks would use Shoreline Drive and Pine Avenue as haul routes to access the Project Site. The 128 truck trips were assigned on top of the Existing Conditions A.M. peak-hour traffic volumes (since daily construction activities would end before the P.M. peak hour). As shown in Table 8 of the Traffic Study, with the addition of truck trips during the A.M. peak

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[8] *It is noted that the continuous concrete pour planned during the building foundation phase would involve a greater number of haul truck trips; however, that activity would occur over a 12- to 18-hour period beginning on a Friday evening and lasting until Saturday, and thus would occur during off-peak hours. Accordingly, the construction traffic analysis is based on the maximum number of haul trips occurring during the mass excavation and grading phase in order to evaluate the effect of haul trips on typical weekday peak roadway conditions.*

hour, the study intersections along the haul route would still operate at LOS A. Therefore, construction traffic impacts to levels of service would be less than significant.

(b) Access and Safety

Temporary lane closures along Pine Avenue and Seaside Way adjacent to the Project Site may be necessary during Project construction. Any such closures would be coordinated with and approved by the City of Long Beach Department of Public Works, Traffic and Transportation Bureau. In addition, accordance with Project Design Feature TRA-1, traffic control would be provided for any street/lane closure, detour, or other disruption to traffic circulation, as appropriate.

The sidewalks along Seaside Way and Pine Avenue may be temporarily closed to pedestrians during construction for safety purposes. In addition, due to the sidewalk closure, the bus stop on Pine Avenue and Seaside Way may need to be temporarily relocated. Appropriate detour signage would be installed per Project Design Feature TRA-1, and, as discussed further below, a temporary bus stop would be provided in coordination with Long Beach Transit to ensure uninterrupted service. In addition, access to the Convention Center Walkway would be maintained. Therefore, access and safety impacts during Project construction would be less than significant.

(c) Public Transit

The nearest bus stops to the Project Site are located on Ocean Boulevard near Pine Avenue and on Pine Avenue at Seaside Way. The bus stop on Ocean Boulevard would be permanently relocated in coordination with Long Beach Transit. However, temporary relocation of the Pine Avenue bus stop may be needed, as the sidewalk may be closed temporarily to ensure pedestrian safety. Appropriate detour signage would be installed per Project Design Feature TRA-1, and new temporary and permanent bus stops for the two stops nearest the Project Site would be provided in coordination with Long Beach Transit to ensure uninterrupted service. Therefore, temporary impacts to transit service during Project construction would be less than significant.

(2) Operational Impacts

(a) Intersection Levels of Service

(i) Existing Plus Project Conditions

As previously discussed, the analysis of Existing Plus Project Conditions evaluates potential Project-related traffic impacts as compared to Existing Conditions during the typical weekday A.M. and P.M. peak periods for all intersections. In this scenario, the estimated Project traffic volumes during the morning and afternoon peak periods were added to the existing morning and afternoon peak period traffic volumes, respectively, to determine the change in the volume-to-capacity ratios for the study intersections and the corresponding LOS. Table IV.E-5 on page IV.E-30 summarizes the peak-hour LOS results at the 15 study intersections under Existing Plus Project Conditions. As shown therein, traffic associated with the Project would not cause a significant impact at any of the study intersections. All study intersections would operate acceptably at LOS D or better, except for Intersection No. 10, Alamitos Avenue/Shoreline Drive and Ocean Boulevard, which would operate at LOS E during the P.M. peak period, although the Project-related increase in traffic would not meet the applicable significance threshold. Based on the above, under Existing Plus Project Conditions, traffic impacts at all 15 study intersections would be less than significant during both the A.M. and P.M. peak hours.

(ii) Future Plus Project Conditions

The analysis of Future Plus Project Conditions identifies the potential impacts of the Project at full buildout on projected future traffic conditions during the typical weekday morning and afternoon peak periods for the study intersections by adding the Project-generated traffic to the Future Without Project traffic forecasts for the year 2022 (i.e., the Project build out year). Table IV.E-6 on page IV.E-32 summarizes the intersection levels of service under Future Plus Project Conditions during the weekday morning and afternoon peak hours. As shown therein, under Future Plus Project Conditions, the Project would not cause a significant impact at any of the study intersections, and 11 of the 15 study intersections would continue to operate acceptably at LOS D or better. Operating conditions at the remaining four study intersections would be as follows, although the Project-related increases in traffic at these intersections would not meet the applicable significance thresholds:

- Intersection No. 10: Alamitos Avenue/Shoreline Drive & Ocean Boulevard (LOS F—P.M.)
- Intersection No. 11: Alamitos Avenue & Broadway (LOS F—P.M.)
- Intersection No. 13: Alamitos Avenue & 4th Street (LOS F—P.M.)
- Intersection No. 15: Alamitos Avenue & 7th Street (LOS E—P.M.)

In summary, under Future Plus Project Conditions, traffic impacts at all 15 study intersections would be less than significant during both the A.M. and P.M. peak hours.

Table IV.E-5
Existing Plus Project Intersection Level of Service

	Intersection	Control	Peak Hour	Existing Conditions (2018) V/C	Existing Conditions (2018) LOS	Existing Plus Project V/C	Existing Plus Project LOS	V/C Change	Signif. Impact?
1.	Pacific Ave. and Ocean Blvd.	Signal	A.M. P.M.	0.568 0.538	A A	0.584 0.555	A A	0.016 0.017	No No
2.	Pine Ave. and Ocean Blvd.	Signal	A.M. P.M.	0.511 0.674	A B	0.545 0.782	A C	0.034 0.108	No No
3.	Long Beach Blvd. and Ocean Blvd.	Signal	A.M. P.M.	0.615 0.497	B A	0.637 0.509	B A	0.022 0.012	No No
4.	Pine Ave. and Shoreline Dr.	Signal	A.M. P.M.	0.387 0.464	A A	0.41 0.464	A A	0.023 0.000	No No
5.	Pine Ave. and Seaside Way	Signal	A.M. P.M.	0.277 0.294	A A	0.385 0.437	A A	0.108 0.143	No No
6.	Magnolia Ave. & Broadway	Signal	A.M. P.M.	0.481 0.592	A A	0.52 0.597	A A	0.039 0.005	No No
7.	Golden Shore (I-710 Access) & Ocean Blvd.	Signal	A.M. P.M.	0.474 0.61	A B	0.488 0.612	A B	0.014 0.002	No No
8.	Queens Way/Magnolia Ave. & Ocean Blvd.	Signal	A.M. P.M.	0.575 0.654	A B	0.63 0.691	B B	0.055 0.037	No No
9.	Atlantic Ave. & Ocean Blvd.	Signal	A.M. P.M.	0.573 0.531	A A	0.601 0.551	B A	0.028 0.020	No No
10.	Alamitos Ave./Shoreline Dr. & Ocean Blvd.	Signal	A.M. P.M.	0.704 **0.904**	C **E**	0.718 **0.921**	C **E**	0.014 **0.017**	No No
11.	Alamitos Ave. & Broadway	Signal	A.M. P.M.	0.609 0.738	B C	0.621 0.744	B C	0.012 0.006	No No
12.	Alamitos Ave. & 3rd St.	Signal	A.M. P.M.	0.616 0.474	B A	0.627 0.487	B A	0.011 0.013	No No
13.	Alamitos Ave. & 4th St.	Signal	A.M. P.M.	0.731 0.735	C C	0.742 0.746	C C	0.011 0.011	No No

Table IV.E-5 (Continued)
Existing Plus Project Intersection Level of Service

	Intersection	Control	Peak Hour	Existing Conditions (2018)		Existing Plus Project		V/C Change	Signif. Impact?
				V/C	LOS	V/C	LOS		
14.	Alamitos Ave. & 6th St.	Signal	A.M. P.M.	0.627 0.695	B B	0.636 0.703	B C	0.009 0.008	No No
15.	Alamitos Ave. & 7th St.	Signal	A.M. P.M.	0.756 0.782	C C	0.762 0.793	C C	0.006 0.011	No No

*Intersection operations below acceptable LOS D are shown in **bold**.*
Source: Fehr & Peers, 2019.

Table IV.E-6
Opening Year Plus Project Intersection Level of Service

	Intersection	Control	Peak Hour	Opening (2022) Year No Project		Opening (2022) Plus Buildout Project		V/C Change	Signif. Impact?
				V/C	LOS	V/C	LOS		
1.	Pacific Ave. and Ocean Blvd.	Signal	A.M. P.M.	0.547 0.547	A A	0.563 0.564	A A	0.016 0.017	No No
2.	Pine Ave. and Ocean Blvd.	Signal	A.M. P.M.	0.550 0.721	A C	0.6 0.841	A D	0.050 0.120	No No
3.	Long Beach Blvd. and Ocean Blvd.	Signal	A.M. P.M.	0.626 0.543	B A	0.642 0.555	C A	0.016 0.012	No No
4.	Pine Ave. and Shoreline Dr.	Signal	A.M. P.M.	0.409 0.491	A A	0.433 0.491	A A	0.024 0.000	No No
5.	Pine Ave. and Seaside Way	Signal	A.M. P.M.	0.321 0.356	A A	0.394 0.448	A A	0.073 0.092	No No
6.	Magnolia Ave. & Broadway	Signal	A.M. P.M.	0.602 0.863	B D	0.612 0.868	B D	0.010 0.005	No No
7.	Golden Shore (I-710 Access) & Ocean Blvd.	Signal	A.M. P.M.	0.583 0.751	A C	0.597 0.753	A C	0.014 0.002	No No
8.	Queens Way/Magnolia Ave. & Ocean Blvd.	Signal	A.M. P.M.	0.674 0.734	B C	0.729 0.78	C C	0.055 0.046	No No
9.	Atlantic Ave. & Ocean Blvd.	Signal	A.M. P.M.	0.615 0.577	B A	0.642 0.596	B A	0.027 0.019	No No
10.	Alamitos Ave./Shoreline Dr. & Ocean Blvd.	Signal	A.M. P.M.	0.772 **1.046**	C **F**	0.787 **1.063**	C **F**	0.015 0.017	No No
11.	Alamitos Ave. & Broadway	Signal	A.M. P.M.	0.707 **1.090**	C **F**	0.716 **1.101**	C **F**	0.009 0.011	No No
12.	Alamitos Ave. & 3rd St.	Signal	A.M. P.M.	0.847 0.773	D C	0.859 0.783	D C	0.012 0.010	No No
13.	Alamitos Ave. & 4th St.	Signal	A.M. P.M.	0.860 **1.121**	D **F**	0.872 **1.138**	D **F**	0.012 0.017	No No

Table IV.E-6 (Continued)
Opening Year Plus Project Intersection Level of Service

	Intersection	Control	Peak Hour	Opening (2022) Year No Project		Opening (2022) Plus Buildout Project		V/C Change	Signif. Impact?
				V/C	LOS	V/C	LOS		
14.	Alamitos Ave. & 6th St.	Signal	A.M. P.M.	0.716 0.818	C D	0.725 0.826	C D	0.009 0.008	No No
15.	Alamitos Ave. & 7th St.	Signal	A.M. P.M.	0.838 **0.924**	D **E**	0.843 **0.935**	D **E**	0.005 0.011	No No

Intersection operations below acceptable LOS D are shown in ***bold****.*
Source: Fehr & Peers, 2019.

(b) Regional Transportation System

(i) CMP Arterial Monitoring Station Analysis

As previously described, two CMP arterial monitoring locations are located in proximity to the Project Site. These include East Shoreline Drive/Alamitos Avenue and Ocean Boulevard, identified herein as Intersection No. 10, and Alamitos Avenue and 7th Street, identified herein as Intersection No. 15. CMP guidelines require that arterial monitoring intersection locations must be examined if a proposed project will add 50 or more trips during either the A.M. or P.M. weekday peak hours. As provided above, the Project would generate 4,906 new daily trips, including 320 A.M. peak-hour trips and 372 P.M. peak-hour trips. At Intersection No. 10, the Project would add 64 A.M. peak-hour trips and 74 P.M. peak-hour trips. At Intersection No. 15, the Project would add 48 A.M. peak-hour trips and 54 P.M. peak-hour trips.

Since the Project would add 50 or more trips at the identified CMP intersections during the A.M. peak hour and/or P.M. peak hour, a CMP intersection traffic impact analysis was conducted. Per CMP guidelines, impacts are considered significant at CMP intersections if the Project increases V/C by 0.02 and causes LOS F, or if the facility is already at LOS F and the Project increases the intersection V/C by 0.02. Since Project traffic would not increase V/C by 0.02 at these intersections, impacts on CMP monitoring intersections would be less than significant.

(ii) CMP Freeway Segment Analysis

The nearest mainline freeway monitoring location is CMP Station No. 1078: I-710 Freeway between Pacific Coast Highway and Willow Street. The Project is not anticipated to add 150 or more trips in either direction to any freeway facility during the A.M. or P.M. peak hours. Therefore, a CMP freeway traffic impact analysis is not required.

(c) Public Transit

As previously discussed, public transportation in the Project area is provided by Metro and Long Beach Transit. As shown in Table IV.E-4 on page IV.E-21, the Project would generate 436 A.M. peak-hour trips and 487 P.M. peak-hour trips. In accordance with CMP guidelines, the Project trip generation values presented in Table IV.E-4 were used as the basis to estimate Project-related transit trip generation. Specifically, an average vehicle ridership (AVR) factor of 1.4 was applied to the Project's trip generation, and 15 percent of the resulting person trips were assumed to use transit, consistent with CMP guidance for commercial trips within 0.25-mile of a CMP transit center. As the Project is located approximately 650 feet from the First Street Transit Gallery (also referred to as the Long Beach Transit Gallery or the Long Beach Transit Mall), the Project would generate an estimated 92 transit riders in the A.M. peak hour and 102 transit riders in the P.M. peak hour. Given the availability of public transit in the Project area, it is anticipated that the existing transit service in the Project area would be able to accommodate the Project-generated transit trips. Refer to the Traffic Study in Appendix E.1 of this Draft EIR for details regarding transit capacity on local lines of service during the A.M. and P.M. peak hours. As indicated therein, the Project's projected transit riders would only utilize up to 1.6 percent of available transit capacity during peak hours. Additionally, transit service providers routinely adjust service up to two times a year to reflect demand, and additional transit riders would increase farebox recovery on transit lines. Therefore, given the number of transit trips generated by the Project and the existing transit routes in the Project vicinity, the existing public transit system would not be substantially impacted by the Project. Additionally, as discussed above, the bus stop on Ocean Boulevard would be permanently relocated as part of the Project. A new permanent bus stop would be provided in coordination with Long Beach Transit to ensure uninterrupted service. Thus, impacts to the existing public transit system would be less than significant.

(d) Access and Circulation

As described in Section II, Project Description, of this Draft EIR, vehicular access to the Project garage would be provided via driveways along Seaside Way and Pine Avenue, with primary access from Seaside Way. These driveways would provide access to the valet parking areas on Level 1 and subterranean Level P1. In addition, two existing curb cuts on Ocean Boulevard would be utilized for passenger drop-off and valet service at the main hotel entrance on Level 3. All visitors parking on-site would be required to valet their vehicle. Deliveries, trash, and other service vehicles would access the building from Seaside Way via a loading bay at the southeast corner of the Project Site. As evaluated in the Traffic Study, Project access was determined to be adequate.

(e) Queuing Analysis

To provide a conservative analysis of driveway queuing, the Project's ingress and egress trip generation estimates were not adjusted to reflect employees (who would be required to park off-site) and any visitors who choose not to use the on-site valet service and instead park in another location. Accordingly, 378 A.M. peak-hour trips and 430 P.M. peak-hour trips were assumed for the queueing analysis.[9] Queuing calculations are provided in Appendix D of the Traffic Study.

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[9] *These trip counts reflect all vehicles potentially entering the main driveway and thus include pass-by trips, but do not include internal capture.*

The Project would provide 350 feet of queuing capacity within the two lanes of the driveway loop, excluding the pedestrian crossing. The 95th percentile queues were measured for the single exit lane, and 100 pedestrian crossings were conservatively assumed to occur during the peak hour. The 95th percentile queue was measured as 530 feet under P.M. peak-hour conditions, which could not be accommodated by the proposed driveway as currently designed and under unrestricted operations.

Field observations along Ocean Boulevard at the Project driveway indicate that gaps occur between waves of vehicles due to the metering of traffic from upstream traffic signals. In particular, Intersection No. 2, Ocean Boulevard and Pine Avenue, has a two-minute cycle length which provides at least one gap per minute from signal phase changes alone. As such, vehicles exiting the Project's main driveway could have lower driveway delays and shorter queues when departing the Project Site, which the queuing calculations do not reflect.

Additional analysis was conducted due to concern over the short distance between the inbound driveway and Intersection No. 2, Ocean Boulevard and Pine Avenue, and the possibility of inbound Project traffic spilling back onto Ocean Boulevard. As discussed above, the ingress and egress volumes are conservative, as they include employees (who would be required to park off-site) and all guests (not all of whom are anticipated to use the valet service and park on-site). As shown in Table 9 of the Traffic Study, the average number of vehicles per 120-second cycle length is estimated to be 4.1 vehicles per cycle from eastbound Ocean Boulevard. Roughly four vehicles per cycle entering the driveway would not negatively affect operations at Intersection No. 2, Ocean Boulevard and Pine Avenue.

In addition, the inbound driveway location relative to the upstream intersection is consistent with other existing driveway locations along Ocean Boulevard. As such, driver expectations relative to driveway location would be consistent along Ocean Boulevard. In addition, the existing 19-foot-wide lane adjacent to the Project Site provides sufficient width to accommodate a right-turn and through movement at the inbound driveway without impeding traffic on Ocean Boulevard.

Nonetheless, the queuing analysis indicates that peak hours and peak events may pose a capacity shortage at the Project's Ocean Boulevard driveway loop. Therefore, it is recommended that a queuing plan be implemented to ensure efficient valet operations and manage queuing within the driveway loop. More specifically, as detailed in the Traffic Study, it is recommended that the hotel provide enough valet staff to facilitate the movement of vehicles after loading and unloading, keep the driveway loop free of obstructions, and respond to queuing issues as they arise. During peak hours and peak events, queuing at the inbound driveway would be monitored, and a second valet staging area in the garage by the Seaside Way driveway would be used to prevent any queue spillback. In situations where the inbound driveway is near capacity, the driveway would be closed to incoming vehicles, and arriving guests would be rerouted to the secondary valet staging area. Additionally, during peak hours outbound guests who valeted their vehicles would be directed to the secondary valet staging area to pick up their vehicles. With such plan in place, adequate queuing capacity would be available to accommodate the 95th percentile queue during peak hours and peak events.

(f) Bicycle, Pedestrian, and Vehicular Safety

The City has goals, policies, and implementation measures designed to create a system of complete streets that support and encourage all mobility users, regardless of age or ability, including pedestrians, bicyclists and transit riders. As previously described, pedestrian facilities in the study area include sidewalks, crosswalks, and pedestrian signals, including the Convention Center Walkway which provides direct access between the Project Site and the Long Beach Convention & Entertainment Center. As part of the Project, the adjacent sidewalks would be widened and landscaping would be added surrounding the Project Site.

As discussed above, there are no existing or proposed bike routes adjacent to the Project Site, although there are existing bike lanes on Seaside Way that terminate eastbound at Pine Avenue. The bike share docking station currently located at the northwest corner of the Project Site would remain. In accordance with Project Design Feature TRA-2, TDM measures would be implemented as part of the Project and would include bicycle parking (bike racks located outside and secure bike parking within the garage), end-of-trip bicycle facilities (bike storage, showers, lockers, and a maintenance station) for employees, and the availability of bike share passes for guests. Given that Project access would be adequate (as evaluated above) and the provision of bike facilities, including retention of the on-site bike share station, the Project would not substantially increase hazards to bicyclists, pedestrians, or vehicles or negatively affect pedestrian and bicycle facilities. Impacts related to bicycle and pedestrian safety and facilities would be less than significant.

(g) Parking

As previously discussed, LBMC Chapter 21.41 and the PD-6 Ordinance set forth parking requirements for development projects based on land use type(s) and floor area. The ordinance recognizes the need for reductions in parking requirements due to the unique transportation characteristics in the Project area. A strict application of the LBMC parking requirements would require 891 parking spaces for the Project. However, since the hotel's parking demand would peak at different times of the day or week, strict application of the LBMC parking requirements would result in an oversupply of parking.

The Project would provide 151 parking spaces within the on-site garage. The shared parking study presented in the Parking Memo provided in Appendix E.2 of this Draft EIR determined that 151 spaces would not be sufficient capacity for Project guests. As such, the Applicant has arranged for off-site parking at the Terrace Theater Parking Garage located at 300 Seaside Way, which would provide 280 overflow spaces. According to the shared parking analysis, the scenario with the greatest estimated parking demand would be a worst-case weekend event entailing full occupancy of the hotel, restaurant, and event space. During a worst-case weekend event, the estimated parking demand would be 395 spaces, which includes 48 spaces for employees, resulting in a need for 347 guest spaces. Accounting for a 20-space parking buffer required by the City, 216 off-site parking spaces would be required. Accordingly, a surplus of 64 parking spaces would remain available at the Terrace Theater Parking Garage. Furthermore, as set forth in Project Design Feature TRA-2, the Project's TDM Plan would reduce vehicular trips, which in turn would reduce parking demand. Relevant TDM measures would include bike facilities, the availability of transit passes, parking unbundling, and a guaranteed ride home program for employees, among others.

As described above, the Project meets the PRC Section 21099 definition of an employment center project as a commercially zoned site with a proposed FAR of greater than 0.75:1 within a transit priority area and meets the PRC Section 21099 definition of an infill site as a lot located within an urban area that has been previously developed. Therefore, pursuant to SB 743, the Project's parking impacts shall not be considered a significant impact on the environment as a matter of law.

4. Cumulative Impacts

a. Construction Impacts

As previously discussed, the construction of 57 related projects is anticipated in the general Project area. These 57 related projects are dispersed throughout the area and would draw upon a workforce from all parts of the Los Angeles County and Orange County region. Many, and likely most, of the construction workers are anticipated to arrive and depart the individual construction sites during off-peak hours (i.e., arrival prior to 7:00 A.M. and departure between 3:00 and 4:00 P.M.), thereby avoiding construction-related trips during the A.M. and P.M. peak traffic periods. In addition, it is anticipated that the haul routes for the related projects would be approved by the City according to the location of the individual construction sites and the ultimate disposal destination(s) in a manner that reduces impacts to the local and regional roadway systems as much as possible. The City's established review process takes into consideration overlapping construction projects and would balance haul routes to minimize the impacts of cumulative hauling on any particular roadway.

As evaluated in the Traffic Study and discussed above, the Project's construction traffic impacts would be less than significant, and all study intersections along the haul route would continue to operate at LOS A during the A.M. peak-hour (daily construction activities would end before the P.M. peak hour). Accordingly, the Project's impacts would not be cumulatively considerable, and cumulative construction-related traffic impacts would be less than significant.

b. Operational Impacts

The traffic models used in the above analysis incorporate forecasted traffic increases due to ambient growth as well as the related projects identified in the area through the year 2022. Furthermore, the CMP analysis presented above evaluates traffic impacts on a larger, regional scale. Therefore, cumulative impacts on intersections and the regional transportation system as a result of the Project are accounted for in the analysis above. The following is a summary of the Future Plus Project Conditions —or cumulative—impacts.

(1) Intersection Levels of Service

As detailed above, under cumulative conditions (Future Plus Project Conditions), none of the study intersections would experience significant impacts as a result of the Project. Therefore, the Project's impacts would not be cumulatively considerable, and cumulative impacts at all study intersections would be less than significant.

(2) Regional Transportation System

(a) CMP Arterial Monitoring Station Analysis

As described above, the Project would add 50 or more trips at the identified CMP intersections during the weekday A.M. peak hour and P.M. peak hour. Specifically, at Intersection No. 10, the Project would add 64 A.M. peak-hour trips and 74 P.M. peak-hour trips; Intersection No. 15, the Project would add 48 A.M. peak-hour trips and 54 P.M. peak-hour trips. Since Project traffic would not increase V/C by 0.02 at these intersections, impacts on CMP monitoring intersections would be less than significant. Therefore, the Project would not contribute to a significant cumulative impact at this location.

(b) CMP Freeway Segment Analysis

As analyzed above, the Project would not add 150 or more trips (in either direction) during the A.M. or P.M. weekday peak periods at the nearest mainline freeway monitoring location. Therefore, the Project would not contribute to a significant cumulative impact at this location.

(c) Public Transit

As with the Project, the related projects would generate an overall increase in transit ridership. However, this effect is a considered a positive impact and is consistent with City land use and transportation policies to reduce traffic. Given the availability of public transit in the Project area, the anticipated increased transit ridership associated with the Project and related projects is not expected to exceed the capacity of transit systems. Thus, Project impacts with regard to transit would not be cumulatively considerable, and cumulative impacts would be less than significant.

(3) Access and Circulation

Due to the distance of the related projects from the Project Site, it is not anticipated that the Project, when combined with the related projects, would create a significant cumulative impact relative to access and circulation. In addition, as with the Project, the related projects would be subject to review by the City for compliance with standard requirements regarding adequate access and circulation. Therefore, the Project's impacts would not be cumulatively considerable, and cumulative impacts to access and circulation would be less than significant.

(4) Bicycle, Pedestrian, and Vehicular Safety

As analyzed above, Project impacts related to bicycle, pedestrian, and vehicular safety would be less than significant. In addition, as with the Project, it is anticipated that future related projects would be subject to City review to ensure that such projects are designed with adequate safety specifications and facilities for bikes and pedestrians, including standards for sight distance, sidewalks, crosswalks, and pedestrian movement controls. Thus, Project impacts with regard to bicycle, pedestrian, and vehicular safety would not be cumulatively considerable, and cumulative impacts would be less than significant.

(5) Parking

As with the Project, all related projects would be subject to City review to ensure that adequate parking be provided. In addition, pursuant to SB 743, the Project's parking impacts shall not be considered a significant impact on the environment as a matter of law. Therefore, Project impacts with regard to parking would not be cumulatively considerable, and cumulative parking impacts would be less than significant.

5. Mitigation Measures

Project-level and cumulative impacts would be less than significant with regard to intersection levels of service; the regional transportation system; public transit; access and circulation; bicycle, pedestrian, and vehicular safety; and parking. Therefore, no mitigation measures are required with respect to these issues.

Although the City has not adopted a threshold of significance pertaining to vehicle queuing, given the potential for queuing capacity issues at the Ocean Boulevard driveway loop during peak hours and peak events, the following measure is recommended:

Mitigation Measure TRA-1: During A.M. and P.M. peak hours and peak events, queuing at the inbound Ocean Boulevard driveway shall be monitored by the hotel's valet staff. When the inbound driveway is observed to be near capacity, a queuing plan shall be implemented to create a secondary valet staging area and prevent any queue spillback onto the public right-of-way. The queuing plan shall be submitted to the City of Long Beach Department of Public Works, Traffic and Transportation Bureau and the Department of Development Services, Planning Bureau for review prior to building permit issuance and approval prior to Certificate of Occupancy.

6. Level of Significance After Mitigation

a. Construction

As described above, Project-level and cumulative impacts to traffic during Project construction would be less than significant, and no mitigation is required.

b. Operation

(1) Intersection Levels of Service

Intersection levels of service impacts at all study intersections would be less than significant under Existing With Project Conditions and Future With Project Conditions. No mitigation is required.

(2) Regional Transportation System

(a) CMP Arterial Monitoring Station Analysis

As described above, Project-level and cumulative impacts to CMP arterial monitoring stations would be less than significant, and no mitigation is required.

(b) CMP Freeway Segment Analysis

As analyzed above, the Project would not add 150 or more trips (in either direction) during the A.M. or P.M. weekday peak periods at the nearest mainline freeway monitoring location. Therefore, Project-level and cumulative impacts to a CMP freeway monitoring location would be less than significant, and no mitigation is required.

(3) Public Transit

Project-level and cumulative impacts with regard to transit would be less than significant, and no mitigation is required.

(4) Access and Circulation

Project-level and cumulative access and circulation impacts would be less than significant, and no mitigation is required.

(5) Queuing Analysis

With a queuing plan in place as set forth in Mitigation Measure TRA-1, adequate queuing capacity would be available to accommodate the 95th percentile queue during peak hours and peak events. Specifically, as detailed in the Traffic Study, by adding a secondary valet staging area when needed, the number of vehicles using the driveway loop during the P.M. peak hour would be reduced from 430 vehicles per hour to 280 vehicles per hour. The number of vehicles turning right on Ocean Boulevard from Pine Avenue to access the main driveway would be reduced from 207 vehicles per hour to 57 vehicles per hour, or just under two vehicles per signal cycle. This would reduce the outbound queues at the driveway from 530 feet to 206 feet, which could be accommodated by the proposed driveway loop.

(6) Bicycle, Pedestrian, and Vehicular Safety

Project-level and cumulative access impacts related to bicycle, pedestrian, and vehicular safety and facilities would be less than significant, and no mitigation is required.

(7) Parking

Project-level and cumulative impacts related to parking would be less than significant, and no mitigation is required. In any event as previously discussed, pursuant to SB 743, the Project's parking impacts shall not be considered a significant impact on the environment as a matter of law.

V. Alternatives

V. Alternatives

1. Introduction

The identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process under CEQA. Specifically, Public Resources Code (PRC) Section 21002.1(a) establishes the need to address alternatives in an EIR by stating that in addition to determining a project's significant environmental impacts and indicating potential means of mitigating or avoiding those impacts, "the purpose of an environmental impact report is… to identify alternatives to the project."

Direction regarding the consideration and discussion of project alternatives in an EIR is provided in CEQA Guidelines Section 15126.6 as follows:

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible.*

The CEQA Guidelines emphasize that the selection of project alternatives be based primarily on the ability to avoid or substantially lessen significant impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." The CEQA Guidelines further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are addressed. In selecting project alternatives for analysis, potential alternatives must be feasible. CEQA Guidelines Section 15126.6(f)(1) states that:

> *Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations,*

jurisdictional boundaries […], and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site […]

Beyond these factors, CEQA Guidelines Section 15126.6(e) requires the analysis of a “no project” alternative, and CEQA Guidelines Section 15126.6(f) requires an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives.

2. Overview of Selected Alternatives

As indicated above, the intent of the alternatives is to reduce the significant impacts of a project. Based on the analyses provided in Section IV, Environmental Impact Analysis, of this Draft EIR, implementation of the Project would result in significant impacts that cannot be feasibly mitigated with respect to cumulative construction noise. Accordingly, the following alternatives to the Project have been selected for evaluation based on the significant environmental impacts of the Project, the objectives established for the Project (listed in Section II, Project Description, of this Draft EIR), the feasibility of the possible alternatives that were considered, and public input received during the Draft EIR scoping process:

- Alternative 1: No Project/No Build Alternative;
- Alternative 2: Mixed-Use Alternative;
- Alternative 3: Reduced Mixed-Use Alternative;
- Alternative 4: PD-6 Zoning Compliant Residential Alternative;
- Alternative 5: PD-6 Zoning Compliant Office Alternative

Each of these alternatives is described and evaluated below.

3. Alternatives Considered and Rejected

As set forth in CEQA Guidelines Section 15126.6(c), an EIR should identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. According to the CEQA Guidelines, among the factors that may be used to eliminate an alternative from detailed consideration is the alternative’s failure to meet most of the basic project objectives, the alternative’s infeasibility, or the alternative's inability to avoid significant environmental impacts. Alternatives to the Project that were considered and rejected as infeasible are discussed below.

- **Alternative Project Site:** Under this alternative, the Project would be constructed on the "elephant lot," located at the corner of E. Seaside Way and E. Shoreline Drive, which serves as a surface parking lot for the Long Beach Convention Center. This alternative would interfere with existing leases for this parking lot, result in inadequate parking for special events including the Long Beach Gran Prix, result in a height exceeding the City's General Plan Land Use Element update, and would be inconsistent with the Successor Agency Long Range Property Management Plan. For these reasons, this alternative was rejected from further consideration.

- **Full Size Office Alternative**: An alternative as considered that would construct 510,000 square feet of office uses along with 17,113 square feet of restaurant uses, and 9.887 square feet of retail uses. However, this alternative would have required 2,158 parking spaces which would have required approximately 18 levels of on-site parking which was determined to be infeasible. Therefore, this alternative was rejected from further consideration and a scaled down office alternative (Alternative 5) is included below.

- **Medical Office Tower Alternative:** An alternative was considered that would construct 510,000 square feet of medical office uses with physical therapy, outpatient surgical, and other medical services, along with 27,000 square feet of retail and restaurant space. However, a preliminary investigation of traffic indicated this alternative would exacerbate the Project's traffic impacts, which would in turn exacerbate operational air quality impacts associated with mobile emissions and off-site operational noise associated with traffic. Therefore, this alternative was rejected from further consideration.

4. Alternatives Analysis Format

In accordance with CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the Project. Furthermore, each alternative is evaluated to determine whether the alternative would meet most of the Project objectives identified in Section II, Project Description, of this Draft EIR.[1] Moreover, although the CEQA Guidelines provide that the purpose of the alternatives analysis is to determine whether an alternative can avoid one or more significant impacts of a proposed project, each alternative analyzed herein is compared to each Project impact, including

[1] *State of California, CEQA Guidelines Section 15126.6 (c).*

those impacts that would be less than significant, for full disclosure purposes. Accordingly, the evaluation of each of the alternatives follows the process described below:

a. The net environmental impacts of the alternative are determined for each environmental issue area analyzed in Section IV of this Draft EIR assuming (unless otherwise stated) that the alternative would implement the same regulatory compliance measures, project design features, and mitigation measures identified in the Draft EIR analysis.

b. Post-mitigation significant and non-significant environmental impacts of the alternative and the Project are compared for each environmental issue area as follows:

   - Less: Where the net impact of the alternative would be clearly less adverse or more beneficial than the impact of the Project, the comparative impact is said to be "less."

   - Greater: Where the net impact of the alternative would clearly be more adverse or less beneficial than the Project, the comparative impact is said to be "greater."

   - Similar: Where the impact of the alternative and Project would be roughly equivalent, the comparative impact is said to be "similar."

c. The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose and basic Project objectives are feasibly and substantially attained by the alternative. However, an analysis of the financial feasibility of each alternative is not provided in this Draft EIR.

Table V-1 on page V-5 provides a summary matrix that compares the impacts associated with the Project with the impacts of each of the analyzed alternatives.

Table V-1
Alternatives Comparison Table

Environmental Issue	Project Impact	Alternative 1: No Project/No Build	Alternative 2: Mixed-Use	Alternative 3: Reduced Mixed Use	Alternative 4: PD 6 Zoning Compliant Residential	Alternative 5: PD 6 Zoning Compliant Office
A. AIR QUALITY						
Construction—Regional & Localized Impacts	Less Than Significant with Mitigation	Less (No Impact)	Similar (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)
Construction—Toxic Air Contaminants	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Less (Less Than Significant)	Similar (Less Than Significant)	Less (Less Than Significant)
Operational—Regional & Localized Impacts	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Less (Less Than Significant)	Less (Less Than Significant)	Less (Less Than Significant)
Operational—Toxic Air Contaminants	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)	Similar (Less Than Significant)	Similar (Less Than Significant)
B. CULTURAL RESOURCES—HISTORIC						
Historic Resources	Less Than Significant with Mitigation	Less (No Impact)	Similar (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)
C. GREENHOUSE GAS EMISSIONS						
Greenhouse Gas Emissions	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Less (Less Than Significant)	Less (Less Than Significant)	Less (Less Than Significant)
D. NOISE						
Construction Noise—On-Site[a]	Less Than Significant with Mitigation	Less (No Impact)	Similar (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)
Construction Noise—Off-Site (Mobile Noise)	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)	Similar (Less Than Significant)	Similar (Less Than Significant)
Construction Vibration—Building Damage/Human Annoyance	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)	Similar (Less Than Significant)	Similar (Less Than Significant)
Operational Noise—On-Site	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Greater (Less Than Significant)	Greater (Less Than Significant)	Greater (Less Than Significant)
Operational Noise—Off-Site (Mobile Noise)	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Less (Less Than Significant)	Less (Less Than Significant)	Greater (Less Than Significant)
E. TRANSPORTATION/TRAFFIC						
Construction	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Less (Less Than Significant)	Similar (Less Than Significant)	Similar (Less Than Significant)
Operational—Transportation System	Less Than Significant	Less (No Impact)	Greater (Significant and Unavoidable)	Less (Less Than Significant)	Less (Less Than Significant)	Less (Less Than Significant)

Table V-1 (Continued)
Alternatives Comparison Table

Environmental Issue	Project Impact	Alternative 1: No Project/No Build	Alternative 2: Mixed-Use	Alternative 3: Reduced Mixed Use	Alternative 4: PD 6 Zoning Compliant Residential	Alternative 5: PD 6 Zoning Compliant Office
Operational—Queuing Analysis	Less Than Significant with Mitigation	Less (No Impact)	Less (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)	Less (Less Than Significant)	Less (Less Than Significant)

[a] *Cumulative on-site construction noise would be significant and unavoidable with the Project and Alternatives 2 through 5.*

Source: Eyestone Environmental, 2019.

V. Alternatives

A. Alternative 1: No Project/No Build Alternative

1. Description of the Alternative

In accordance with the CEQA Guidelines, the No Project Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed. CEQA Guidelines Section 15126.6(e)(3)(B) states "in certain instances, the No Project Alternative means 'no build' wherein the existing environmental setting is maintained." Accordingly, for purposes of this analysis, Alternative 1, the No Project/No Build Alternative, assumes that the Project would not be approved and no new development would occur within the Project Site. Thus, the physical conditions of the Project Site would generally remain as they are today. The Project Site is developed with a surface parking lot consisting of 80 vehicular parking spaces and an automated pay station, as well as portions of Victory Park. No access to the Jergins Trust Tunnel or improvements to Victory Park would be provided. No new construction would occur.

2. Environmental Impacts Analysis

a. Air Quality

(1) Construction

(a) Regional and Localized Emissions

The No Project/No Build Alternative would not alter the existing uses or require any construction activities on the Project Site. As such, Alternative 1 would not result in any construction emissions. Therefore, no construction-related air quality impacts associated with regional and localized emissions would occur under Alternative 1, and impacts would be less than the less-than-significant-with-mitigation impacts of the Project.

(b) Toxic Air Contaminants

Since construction activities would not occur on the Project Site, the No Project/No Build Alternative would not generate substantial toxic air contaminants (TACs). Therefore, no impacts associated with the release of TACs would occur under Alternative 1. As such, TAC impacts under the No Project/No Build Alternative would be less when compared to the less-than-significant impacts of the Project.

(2) Operation

(a) Regional and Localized Emissions

The No Project/No Build Alternative would not result in new development or increased operations that could generate additional operational emissions related to vehicular traffic or the consumption of electricity and natural gas on the Project Site. Therefore, no operational air quality impacts associated with regional and localized emissions would occur under Alternative 1. Thus, such operational impacts associated with regional and localized emissions under Alternative 1 would be less when compared to the less-than-significant impacts of the Project.

(b) Toxic Air Contaminants

The No Project/No Build Alternative would not result in new development or increase the intensity of the existing uses on the Project Site. Therefore, no new increase in mobile source emissions and their associated TACs would occur. No operational impacts associated with TACs would occur under the No Project/No Build Alternative, and such impacts would be less when compared to the less-than-significant impacts of Project.

c. Cultural Resources—Historic

Portions of the Jergins Trust Tunnel, which is a City of Long Beach Historic Landmark, are located on the Project Site. No demolition, grading, or other earthwork activities that could potentially affect this or nearby historical resources would occur under the No Project/No Build Alternative. Therefore, impacts to historical resources would not occur under Alternative 1, and impacts would be less when compared to the Project, which would be less than significant with mitigation. However, under Alternative 1, the Jergins Trust Tunnel would not be rehabilitated and reopened as it would be under the Project.

c. Greenhouse Gas Emissions

The No Project/No Build Alternative would not develop new uses on the Project Site. Therefore, no new greenhouse gas (GHG) emissions would be generated under Alternative 1 and new impacts associated with global climate change would not occur. As such, impacts associated with GHG emissions under the No Project/No Build would be less when compared to the less-than-significant impacts of the Project.

d. Noise

(1) Construction

Construction activities would not occur on the Project Site under the No Project/No Build Alternative. Therefore, no construction-related noise or vibration would be generated on-site or off-site. No impacts associated with construction noise and vibration would occur under Alternative 1. Alternative 1 would therefore avoid the Project's significant and unavoidable cumulative construction noise impact.

(2) Operation

The No Project/No Build Alternative would not develop new uses on the Project Site, and no changes to the existing useswould occur. Therefore, no new stationary or mobile noise sources would be introduced to the Project Site or the Project Site vicinity. As such, no impacts associated with on-site or off-site operational noise would occur under Alternative 1, and impacts would be less when compared to the less-than-significant impacts of the Project.

e. Transportation/Traffic

(1) Construction

Alternative 1 would not result in new physical development and would not generate vehicle trips related to construction, including construction truck trips or construction worker trips. Therefore, no construction-related traffic impacts would occur, which would be less in comparison to the Project's less-than-significant construction traffic impacts.

(2) Operation

Since the No Project/No Build Alternative would not develop new or additional land uses on the Project Site, Alternative 1 would not generate any additional vehicle trips or alter existing access or circulation within the Project Site during operation. In addition, no queuing on Ocean Boulevard would occur. No impacts would occur. Therefore, impacts under the No Project/No Build Alternative would be less when compared to the Project, which would be less than significant with mitigation.

3. Comparison of Impacts

Alternative 1 would avoid the Project's significant environmental impact related to cumulative on-site construction noise. Alternative 1 would also reduce or avoid most of the

Project's less than significant impacts. This alternative would not result in new environmental impacts and would not require mitigation measures to reduce impacts regarding air quality, historic resources, and noise.

4. Relationship of the Alternative to Project Objectives

Under the No Project/No Build Alternative, the existing surface parking lot on the Project Site would continue to operate and no new development would occur. As such, Alternative 1 would not meet the underlying purpose of the Project or the Project objectives. Specifically, Alternative 1 would not meet the following Project objectives:

- Support and expand tourism and business activity in the Downtown Shoreline area by developing new lodging opportunities that are easily accessible to entertainment and commercial destinations in Long Beach to help meet the goals of the City's Blueprint for Economic Development and Local Coastal Program;

- Reduce vehicular trips promoting local, regional, and state mobility objectives and policies by developing a hotel use with convenient access to a variety of alternative transportation options including walking, biking, and public transit, and in close proximity to popular tourist destinations.

- Redevelop an underutilized vacant site by replacing an existing surface parking area with an economically viable and aesthetically attractive development that will be physically and programmatically compatible with the wide variety of urban uses in the vicinity in a manner that will help meet the goals of the City's Revised Long Range Property Management Plan.

- Create a pedestrian-friendly project by improving the portion of Victory Park located within the Project Site to create publicly accessible open space, introducing a pedestrian walkway that connects to the existing Convention Center Walkway, and improved streetscapes around the Project Site.

- Provide short-and long-term employment opportunities and generate transient occupancy tax and other revenue for the City.

- Enhance access to and through Victory park while improving the programming and maintenance of the public park space.

- Provide a mix of convention-serving hotel, hotel amenity, and commercial uses adjacent to the Convention Center that will enhance the convention visitor experience and attract convention guests and bookings to Long Beach.

- Provide public access to, enable the appreciation of and provide education regarding the historic Jergins Trust tunnel.

- Provide high-quality, signature architectural design that will enhance the downtown skyline and provide views of the Long Beach coastline and downtown environs.

- Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation.

Overall, the No Project/No Build Alternative would not meet the Project's underlying purpose to revitalize the Project Site by developing a high quality hotel that provides new lodging opportunities to serve the Long Beach community as well as publicly accessible restaurant and bar uses that encourage pedestrian activity in the vicinity of the Project Site.

V. Alternatives

B. Alternative 2: Mixed-Use Alternative

1. Description of the Alternative

Alternative 2, the Mixed-Use Alternative, would develop residential, office, restaurant, retail, and hotel uses on the Project Site. Specifically, Alternative 2 would develop 28 restricted-income artist-in-residence live/work lofts; 87 market-rate apartments; 23,000 square-feet of co-working office space; 47,000 square feet of traditional office space; 26,000 square feet of restaurant use (inclusive of a 17,000-square-foot “food hall”); 45,000 square feet of retail uses; and a 200-room, 93,000 square-foot hotel, compared to the 429-room hotel, 23,512 square feet of restaurant space, and 26,847 square feet of meeting and ballroom space proposed by the Project. The total amount of development would be similar to the 537,075 square feet proposed by the Project. The 28 live-work units would consist of 1-bedroom units and the 87 market rate apartments would consist of 13 studio units, 35 1-bedroom units, 35 2-bedroom units, and four 3-bedroom units. The proposed uses would be located in two towers ranging in height from 11 to 20 stories, and 138 to 250 feet in height, compared to the 30-story, 375.5-foot tall building with the Project. A total of 775 vehicle parking spaces would be provided in a 8-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1).

Similar to the Project, an additional 280 parking spaces would be provided off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Alternative 2 would also provide 11 bicycle parking spaces located in the parking garage. Alternative 2 would include 17,250 square feet of open space consisting of landscaped courtyards and terraces, a sky deck, a pool deck, gym and yoga studio, library/music room, business center, trellised barbeque area, and dog run deck. Vehicular access to the on-site parking would be provided via driveways accessible from Seaside Way and Pine Avenue. The commercial loading dock and loading area are located immediately adjacent to the parking entrance off of Seaside Way. The proposed hotel use would include valet drop-off area would be located near the main entrance to the hotel on Level 3, accessible via Ocean Boulevard. Like the Project, primary pedestrian access to the proposed uses would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Secondary pedestrian access would be provided via a small lobby located at the corner of Pine Avenue and Seaside Way. Like the Project, Alternative 2 would include access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet.

2. Environmental Impact Analysis

a. Air Quality

(1) Construction

Alternative 2 would involve the same amount of demolition and grading/excavation as the Project, and the same amount of construction because of the similar building size. As with the Project, construction of this Alternative would generate air emissions through the use of heavy-duty construction equipment and haul truck and construction worker trips. With a similar amont of demolition, excavation, and development, intensity of air emissions and fugitive dust from site preparation and construction activities would be similar on days with maximum construction activities. Therefore, regional and localized impacts on these days would be similar to those of the Project and therefore less than significant. Similarly, the amount of site grading and excavation on maximum activity days would be similar to levels proposed under the Project. Impacts would be similar to the Project and less than significant with mitigation.

With respect to TAC emissions, diesel particulate emissions represent the greatest potential for TAC emissions. As Alternative 2 would be similar in scale compared to the Project, impacts due to TAC emissions and the corresponding individual cancer risk would be similar to the Project's less than significant impacts.

(2) Operation

Similar to the Project, operational regional air pollutant emissions associated with Alternative 2 would be generated by vehicle trips to the Project Site and the consumption of electricity and natural gas. As discussed further below, when accounting for pass-by trips and internal capture reductions, Alternative 2 would generate 5,003 daily trips compared to 4,905 daily trips with the Project, an increase of approximately 2 percent.[2] As vehicular emissions depend on the number of trips, vehicular sources would result in a slightly greater increase in air emissions compared to the Project. However, this increase in mobile source emissions would not exceed the SCAQMD daily significance thresholds. Although the overall square footage would be similar to the Project, demand for electricity

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[2] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

and natural gas would be greater than the Project due to the inclusion of residential uses. However, operational energy use emissions would remain below significance thresholds. Therefore, impacts with respect to regional operational emissions would be greater than the Project, but remain less than significant.

With regard to on-site localized area source and stationary source emissions, as with the Project, Alternative 2 would not introduce any major new sources of air pollution within the Project Site. Therefore, similar to the Project, localized impacts from on-site emission sources associated with Alternative 2 would also be less than significant. Such impacts would be similar to the Project due to the similar building size. Localized mobile source operational impacts are determined mainly by peak-hour intersection traffic volumes. As discussed further below in Section V.B.2.e.(2), the number of net new peak-hour trips generated with Alternative 2 would be greater than the Project. Specifically, A.M. peak-hour traffic would be 7 percent greater than the Project and P.M. peak-hour traffic would be 17 percent greater than the Project.[3] Therefore, impacts would be greater than the Project. However, such impacts would remain less than significant.

Also similar to the Project, Alternative 2 would not release substantial amounts of TACs. Thus, like the Project, this Alternative would result in a less than significant air quality impact related to TACs. In addition, as with the Project, development of Alternative 2 would be consistent with the air quality policies set forth in the SCAQMD's Air Quality Management Plan (AQMP) and the City of Long Beach General Plan Air Quality Element, resulting in a less than significant impact.

c. Cultural Resources—Historic

Similar to the Project, Alternative 2 would reconnect the Project Site with the Jergins Trust Tunnel, a subterranean walkway previously associated with the Jergins Trust Building that extends from the Project Site to the north side of Ocean Boulevard near a sub-grade level of the Renaissance hotel north of Ocean Boulevard (the north end of the tunnel would not be reopened as part of Alternative 2). The tunnel would be used for educational tours, and interpretive signage and images would be introduced to describe the tunnel's history. Alternative 2 would therefore have the same potential as the Project to materially alter historic aspects of the tunnel and ground movement and vibration from construction of Alternative 2 may have the potential to damage the tunnel. However, similar to the Project, these impacts would be mitigated to a less than significant level with implementation of

[3] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

Mitigation Measures HIS-1 and HIS-2. Impacts would be less than significant with mitigation, similar to the Project.

c. Greenhouse Gas Emissions

Similar to the Project, Alternative 2 would incorporate sustainability features to reduce GHG emissions and comply with the City of Long Beach Green Building Ordinance, as applicable, as well as to achieve LEED Silver® Certification. Similar to the Project, Alternative 2 would also incorporate features and comply with regulatory measures consistent with the goals of AB 32. Like the Project, Alternative 2 would promote implementation of Senate Bill (SB) 375 and support regional land use and transportation GHG reductions consistent with state regulatory requirements for 2020 and 2035. Although Alternative 2 would have a similar amount of floor area compared to the Project, the amount of natural gas, electricity, and water consumption as well as wastewater generation would be slightly greater than the Project due to the inclusion of residential uses. While Alternative 2 would result in more daily trips than the Project (5,003 vs 4,905 when accounting for pass-by trips and internal capture), the increase in mobile emissions would not result in a significant impact. Overall, GHG impacts would be greater than the Project, but remain less than significant.

d. Noise

(1) Construction

As with the Project, construction of Alternative 2 would generate noise from the use of heavy-duty construction equipment, as well as from haul truck and construction worker trips. The overall amount of building construction would be similar to the Project and construction noise impacts would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring significance, Alternative-level on-site noise impacts on these days would be similar to those of the Project, which would be less than significant with mitigation. However, like the Project, due to the location of related projects in the area, cumulative on-site noise impacts associated with construction would be significant and unavoidable.

With respect to off-site noise impacts from haul trucks, because the total amount of development is similar to the Project, the same number and frequency of haul trucks is anticipated. Impacts would be similar to the Project and less than significant.

Similar to the Project, vibration would be generated during the construction of Alternative 2 from the use heavy-duty construction equipment and haul truck trips. Maximum daily activities during the demolition and excavation phases, which typically generate the highest vibration levels, would be similar to levels expected under the Project. Therefore, similar to the Project, vibration levels from on-site construction activities associated with Alternative 2 are anticipated to be well below the significance thresholds for building damage and human annoyance. Haul truck trips on maximum activity days would be similar to levels under the Project. As such, vibration impacts from off-site sources would be less than significant and similar to those of the Project. Overall, impacts related to construction vibration levels would be less than significant and similar to the Project.

(2) Operation

As described in Section IV.D, Noise, of this Draft EIR, sources of operational noise include: (a) on-site stationary noise sources, which consist of outdoor mechanical equipment (i.e., rooftop condenser units), activities associated with the outdoor spaces, and parking facilities; and (b) off-site mobile (roadway traffic) noise sources. Alternative 2 would include the same sources of operational noise. Given the similar building size and design, noise from outdoor mechanical equipment would be similar to the Project. Alternative 2 would include less open space than the Project (30,408 square feet including improvements to Victory Park compared to 37,404 square feet with the Project), so noise from outdoor spaces would be less than the Project. Noise from parking facilities would be greater than the Project due to the increased number of vehicle parking spaces. Specifically, Alternative 2 would include 775 on-site parking spaces and 280 off-site parking spaces compared to 151 on-site parking spaces and 280 off-site parking spaces with the Project. However, noise from on- and off-site parking lots would be regulated by LBMC Chapter 8.80, which limits noise generated by motor vehicles within parking facilities and because the number of off-site parking spaces would be the same as the Project, noise levels along Ocean Boulevard and Seaside Way would be similar to the Project. Based on the above, on-site noise impacts under Alternative 2 would be less than significant, but greater than the Project due to additional noise from on-site parking.

Alternative 2 would result in 7,481 daily trips compared to 6,224 daily trips with the Project, without accounting for pass-by trips or internal capture.[4,5] As discussed in Section IV.D, Noise, of this Draft EIR, the maximum increase associated with the Project is 2.2 dBA CNEL along Seaside Way, east of Pine Avenue. While the number of daily trips associated with Alternative 2 would increase by approximately 20 percent, roadway noise would still be

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4 *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

5 *The Noise analysis presented in Section IV.D of this Draft EIR evaluated Project trip generation without reductions for pass-by trips and internal capture to present a conservative scenario.*

below the 3 dBA significance threshold. Accordingly, off-site noise impacts associated with traffic would be greater than the Project, but remain less than significant.

e. Transportation/Traffic

(1) Construction

As with the Project, construction of Alternative 2 would generate additional trips from heavy-duty construction equipment, haul trucks, and construction worker trips and the overall amount of demolition, excavation, and construction would be similar to the Project. Also similar to the Project, Alternative 2 would prepare and implement a Construction Traffic Management Plan to reduce resulting effects on the surrounding community including impacts to traffic, access, and public transit. As shown in Table 8 of the Traffic Study included as Appendix E.1 of this Draft EIR, with the addition of truck trips during construction, all study intersections along the haul route would still operate at LOS A. Therefore, since the amount of construction anticipated with Alternative 2 is similar to the Project, construction traffic impacts would also be similar to the Project and remain less than significant.

(2) Operation

Accounting for pass-by trips and internal capture reductions, Alternative 2 would generate 5,003 daily trips including 342 A.M. peak-hour trips and 434 P.M. peak-hour trips compared to 4,905 daily trips including 319 A.M. peak-hour trips and 372 P.M. peak-hour trips with the Project, which represents a 7- and 17-percent increase in A.M. and P.M. peak-hour trips, respectively.[6] Therefore, impacts to the local roadway network would be greater than the less-than-significant impacts of the Project. This increase in peak-hour traffic would result in significant impacts at Intersection No. 10, Alamitos Avenue/Shoreline Drive & Ocean Boulevard and Intersection No. 13, Alamitos Avenue & 4th Street during the P.M. peak hour.[7] The impact at Intersection No. 10 could me mitigated by adding a northbound right-turn overlap phase with the westbound left-turn, but the impact at Intersection No. 13 would require intersection geometry improvements, such as a dedicated northbound right-turn lane. However, given the right-of-way constraints at the intersection, this impact would be considered significant and unavoidable, which is greater than the Project's less-than-significant impacts. With the increased number of trips, impacts to the regional transportation system, access and circulation, and bicycle,

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6 *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

7 *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

pedestrian, and vehicular safety would be greater than the less-than-significant impacts of the Project, but remain less than significant.

With respect to vehicle queuing, Alternative 2 would include a 200-room hotel compared to a 429-room hotel with the Project. Accordingly, vehicle queuing associated with the valet staging area would be less than the Project. Alternative 2 would implement a similar mitigation measure as the Project, but impacts would be less than the Project's less-than-significant-with-mitigation impacts because fewer hotel rooms are proposed.

3. Comparison of Impacts

Alternative 2 generally reflects an alternative proposal in response to the City's original Request for Proposals (RFP) to develop the Project Site and is analyzed herein to compare the Project to an actual proposed alternative submitted to the City and considered as part of the RFP process. As described above, Alternative 2 would result in greater impacts to operational air quality, greenhouse gas emissions, and operational noise than the Project, but these impacts would remain less than significant. However, Alternative 2 would result in new significant and unavoidable impacts with respect to operational traffic and would not avoid the Project's significant and unavoidable impact related to cumulative construction noise. All other impacts would be similar to or less than the Project's impacts. Accordingly, in addition to failing to sufficiently meet key objectives of the Project as discussed below, Alternative 2 fails to meet the requirements of CEQA Guidelines Section 15126.6.

4. Relationship of the Alternative to Project Objectives

As discussed above, Alternative 2 would develop 28 restricted-income artist-in-residence live/work lofts; 87 market-rate apartments; 23,000 square-feet of co-working office space; 47,000 square feet of traditional office space; 26,000 square feet of restaurant use (inclusive of a 17,000-square-foot "food hall"); 45,000 square feet of retail uses; and a 200-room hotel compared to the 429-room hotel, 23,512 square feet of restaurant space, and 26,847 square feet of meeting and ballroom space proposed by the Project. Additionally, like the Project, Alternative 3 would include access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet. As such, Alternative 2 would meet many of the Project's objectives to the same extent as the Project including the following:

- Redevelop an underutilized vacant site by replacing an existing surface parking area with an economically viable and aesthetically attractive development that will be physically and programmatically compatible with the wide variety of urban uses in the vicinity in a manner that will help meet the goals of the City's Revised Long Range Property Management Plan.

- Create a pedestrian-friendly project by improving the portion of Victory Park located within the Project Site to create publicly accessible open space, introducing a pedestrian walkway that connects to the existing Convention Center Walkway, and improved streetscapes around the Project Site.

- Enhance access to and through Victory park while improving the programming and maintenance of the public park space.

- Provide public access to, enable the appreciation of and provide education regarding the historic Jergins Trust tunnel.

- Provide high-quality, signature architectural design that will enhance the downtown skyline and provide views of the Long Beach coastline and downtown environs.

- Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation.

Alternative 2 would meet the Project's underlying purpose to revitalize the Project Site by developing a high quality hotel that provides new lodging opportunities to serve the Long Beach community as well as publicly accessible restaurant and bar uses that encourage pedestrian activity in the vicinity of the Project Site and following Project objectives, but to a lesser extent than the Project because fewer hotel rooms are provided:

- Support and expand tourism and business activity in the Downtown Shoreline area by developing new lodging opportunities that are easily accessible to entertainment and commercial destinations in Long Beach to help meet the goals of the City's Blueprint for Economic Development and Local Coastal Program;

- Provide short-and long-term employment opportunities and generate transient occupancy tax and other revenue for the City.

- Provide a mix of convention-serving hotel, hotel amenity, and commercial uses adjacent to the Convention Center that will enhance the convention visitor experience and attract convention guests and bookings to Long Beach.

Alternative 2 would not meet the following Project objective because it would result in more vehicle trips than the Project:

- Reduce vehicular trips promoting local, regional, and state mobility objectives and policies by developing a hotel use with convenient access to a variety of alternative transportation options including walking, biking, and public transit, and in close proximity to popular tourist destinations.

Overall, Alternative 2 would not fully meet the Project's underlying purpose and the objectives that support the Project's underlying purpose to the same extent as the Project.

V. Alternatives

C. Alternative 3: Reduced Mixed-Use Alternative

1. Description of the Alternative

Alternative 3 would develop the same mix of uses as Alternative 2, but all square footage would be reduced. Specifically, Alternative 3 would develop a mixed-use project with 23 restricted-income, artist-in-residence, live-work lofts; 69 market rate apartments; 18,400 square feet of co-working office space; 37,600 square feet of traditional office space; 20,800 square feet of restaurant uses, including a 13,600-square-foot “food hall”; 36,000 square feet of retail uses; and a 160-room hotel, compared to the 429-room hotel, 23,512 square feet of restaurant space, and 26,847 square feet of meeting and ballroom space proposed by the Project. The total amount of development would be 429,660 square feet compared to 537,075 square feet with the Project. The 23 live-work units would consist of 1-bedroom units and the 69 market rate apartments would consist of 10 studio units, 28 1-bedroom units, 28 2-bedroom units, and three 3-bedroom units. The proposed uses would be located in two towers ranging in height from nine to 16 stories, and 113 to 200 feet in height, compared to the 30-story, 375.5-foot tall building with the Project. A total of 564 vehicle parking spaces would be provided in a 6-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). Similar to the Project, an additional 280 parking spaces would be provided off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Alternative 3 would also provide nine bicycle parking spaces located in the parking garage. Alternative 3 would include 13,800 square feet of open space consisting of landscaped courtyards and terraces, a sky deck, a pool deck, gym and yoga studio, library/music room, business center, trellised barbeque area, and dog run deck. Vehicular access to the on-site parking would be provided via driveways accessible from Seaside Way and Pine Avenue. The commercial loading dock and loading area are located immediately adjacent to the parking entrance off of Seaside Way. The proposed hotel use would include valet drop-off area would be located near the main entrance to the hotel on Level 3, accessible via Ocean Boulevard. Like the Project, primary pedestrian access to the proposed uses would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Secondary pedestrian access would be provided via a small lobby located at the corner of Pine Avenue and Seaside Way. Like the Project, Alternative 3 would include access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet.

2. Environmental Impact Analysis

a. Air Quality

(1) Construction

Alternative 3 would involve the same amount of demolition and grading/excavation as the Project, but less construction because of the reduced building size. As with the Project, construction of this Alternative would generate air emissions through the use of heavy-duty construction equipment and haul truck and construction worker trips. The duration of the construction period and the intensity of air emissions and fugitive dust associated with site preparation and construction activities would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring significance, regional and localized impacts on these days would be similar to those of the Project and therefore less than significant. Similarly, the amount of site grading and excavation on maximum activity days would be similar to levels proposed under the Project. Thus, on an overall comparative basis, since Alternative 3 would emit a similar amount of pollutants over a similar construction duration, impacts would be similar to the Project's less-than-significant-with-mitigation impacts.

With respect to TAC emissions, diesel particulate emissions represent the greatest potential for TAC emissions. As Alternative 3 would be smaller in scale than the Project, impacts due to TAC emissions and the corresponding individual cancer risk would be less than the Project's less-than-significant impacts.

(2) Operation

Similar to the Project, operational regional air pollutant emissions associated with Alternative 3 would be generated by vehicle trips to the Project Site and the consumption of electricity and natural gas. As discussed further below, when accounting for pass-by trips and internal capture reductions, Alternative 4 would generate 4,002 daily trips compared to 4,905 daily trips with the Project.[8] As vehicular emissions depend on the number of trips, vehicular sources would result in a smaller increase in air emissions compared to the Project. In addition, because the overall square footage would be less than the Project,

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[8] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

demand for electricity and natural gas would also be less than the Project. Therefore, impacts with respect to regional operational emissions would be less than the less-than-significant impacts of the Project.

With regard to on-site localized area source and stationary source emissions, as with the Project, Alternative 3 would not introduce any major new sources of air pollution within the Project Site. Therefore, similar to the Project, localized impacts from on-site emission sources associated with Alternative 3 would also be less than significant. Such impacts would be less than the Project due to the reduced building size. Localized mobile source operational impacts are determined mainly by peak-hour intersection traffic volumes. As discussed further below in Section V.C.2.e.(2), the number of net new peak-hour trips generated with Alternative 3 would be less than the Project.[9] Therefore, impacts would be less than the less-than-significant impacts of the Project.

b. Cultural Resources—Historic

Similar to the Project, Alternative 3 would reconnect the Project Site with the Jergins Trust Tunnel, a subterranean walkway previously associated with the Jergins Trust Building that extends from the Project Site to the north side of Ocean Boulevard near a sub-grade level of the Renaissance hotel north of Ocean Boulevard (the north end of the tunnel would not be reopened as part of Alternative 3). The tunnel would be used for educational tours, and interpretive signage and images would be introduced to describe the tunnel's history. Alternative 3 would therefore have the same potential as the Project to materially alter historic aspects of the tunnel and ground movement and vibration from construction of Alternative 3 may have the potential to damage the tunnel. However, similar to the Project, these impacts would be mitigated to a less than significant level with implementation of Mitigation Measures HIS-1 and HIS-2. Impacts would be less than significant with mitigation, similar to the Project.

c. Greenhouse Gas Emissions

Similar to the Project, Alternative 3 would incorporate sustainability features to reduce GHG emissions and comply with the City of Long Beach Green Building Ordinance, as applicable, as well as to achieve LEED Silver® Certification. Similar to the Project, Alternative 3 would also incorporate features and comply with regulatory measures consistent with the goals of AB 32. Like the Project, Alternative 3 would promote implementation of SB 375 and support regional land use and transportation GHG

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[9] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

reductions consistent with state regulatory requirements for 2020 and 2035. Furthermore, Alternative 3 would include less overall development than the Project, which would result in a reduction in the amount of water consumption and wastewater generation, as well as a reduction in the number of daily trips. Overall, GHG impacts would be less than significant and less than the Project's less than significant impacts.

d. Noise

(1) Construction

As with the Project, construction of Alternative 3 would generate noise from the use of heavy-duty construction equipment, as well as from haul truck and construction worker trips. While the overall amount of building construction would be less than Project, construction noise impacts would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring significance, Alternative-level noise impacts on these days would be similar to those of the Project, which would be less than significant with mitigation. However, like the Project, due to the location of related projects in the area, cumulative noise impacts associated with construction would be significant and unavoidable.

With respect to off-site noise impacts from haul trucks, while the overall amount of development would be less than the Project, haul truck trips on maximum activity days would be similar to levels under the Project. Impacts would be similar to the Project and less than significant.

Similar to the Project, vibration would be generated during the construction of Alternative 3 from the use heavy-duty construction equipment and haul truck trips. Maximum daily activities during the demolition and excavation phases, which typically generate the highest vibration levels, would be similar to levels expected under the Project. Therefore, similar to the Project, vibration levels from on-site construction activities associated with Alternative 3 are anticipated to be well below the significance thresholds for building damage and human annoyance. Haul truck trips on maximum activity days would be similar to levels under the Project. As such, vibration impacts from off-site sources would be less than significant and similar to those of the Project. Overall, impacts related to construction vibration levels would be less than significant and similar to the Project.

(2) Operation

As described in Section IV.D, Noise, of this Draft EIR, sources of operational noise include: (a) on-site stationary noise sources, which consist of outdoor mechanical equipment (i.e., rooftop condenser units), activities associated with the outdoor spaces, and parking facilities; and (b) off-site mobile (roadway traffic) noise sources. Alternative 3 would include the same sources of operational noise. Given a reduced building size, noise from outdoor mechanical equipment would be less than the Project. Alternative 3 would include less open space than the Project (26,958 square feet including improvements to Victory Park compared to 37,404 square feet with the Project), so noise from outdoor spaces would be less than the Project. Noise from parking facilities would be greater than the Project due to the increased number of vehicle parking spaces. Specifically, Alternative 3 would include 564 on-site parking spaces and 280 off-site parking spaces compared to 151 on-site parking spaces and 280 off-site parking spaces with the Project. However, noise from on- and off-site parking lots would be regulated by LBMC Chapter 8.80, which limits noise generated by motor vehicles within parking facilities and because the number of off-site parking spaces would be the same as the Project, noise levels along Ocean Boulevard and Seaside Way would be similar to the Project. Based on the above, on-site noise impacts under Alternative 3 would be less than significant, but greater than the Project due to additional noise from on-site parking.

Alternative 3 would result in 5,985 daily trips compared to 6,224 daily trips with the Project, without accounting for pass-by trips or internal capture.[10,11] Accordingly, off-site noise impacts associated with traffic would be less than the Project's less-than-significant impacts.

e. Transportation/Traffic

(1) Construction

As with the Project, construction of Alternative 3 would generate additional trips from heavy-duty construction equipment, haul trucks, and construction worker trips. However, the total amount of development would be reduced by 107,415 square feet compared to the Project, so the overall amount of demolition, excavation, and construction would be reduced. Similar to the Project, Alternative 3 would prepare and implement a Construction Traffic Management Plan to reduce resulting effects on the surrounding community including impacts to traffic, access, and public transit. As shown in Table 8 of the Traffic Study included as Appendix E.1 of this Draft EIR, with the addition of truck trips during construction, all study intersections along the haul route would still operate at LOS A. Therefore, since the amount of construction anticipated with Alternative 3 would be

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[10] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

[11] *The Noise analysis presented in Section IV.D of this Draft EIR evaluated Project trip generation without reductions for pass-by trips and internal capture to present a conservative scenario.*

reduced in comparison to the Project, construction traffic impacts would be less than the less-than-significant impacts of the Project.

(2) Operation

Accounting for pass-by trips and internal capture reductions, Alternative 3 would generate 4,002 daily trips including 272 A.M. peak-hour trips and 347 P.M. peak-hour trips compared to 4,905 daily trips including 319 A.M. peak-hour trips and 372 P.M. peak-hour trips with the Project.[12] Therefore, impacts to the local roadway network would be less than the less-than-significant impacts of the Project. Additionally, with the reduced number of trips, impacts to the regional transportation system, access and circulation, and bicycle, pedestrian, and vehicular safety would be less than the less-than-significant impacts of the Project.

With respect to vehicle queuing, Alternative 3 would include a 160-room hotel compared to a 429-room hotel with the Project. Accordingly, vehicle queuing associated with the valet staging area would be less than the Project. Alternative 3 would implement a similar mitigation measure as the Project, but impacts would be less than the Project's less-than-significant-with-mitigation impacts because fewer hotel rooms are proposed.

3. Comparison of Impacts

As described above, Alternative 3 would result in greater impacts to operational noise than the Project, but this impact would remain less than significant. However, Alternative 3 would not avoid the Project's significant and unavoidable impact related to cumulative construction noise. All other impacts would be similar to or less than the Project's impacts.

4. Relationship of the Alternative to Project Objectives

As discussed above, Alternative 3 would develop a mixed-use project with 23 restricted-income, artist-in-residence, live-work lofts; 69 market rate apartments; 18,400 square feet of co-working office space; 37,600 square feet of traditional office space; 20,800 square feet of restaurant uses, including a 13,600-square-foot "food hall"; 36,000 square feet of retail uses; and a 160-room hotel, compared to the 429-room hotel, 23,512 square feet of restaurant space, and 26,847 square feet of meeting and ballroom

[12] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

space proposed by the Project. Additionally, like the Project, Alternative 3 would include access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet. As such, Alternative 3 would meet many of the Project's objectives to the same extent as the Project including the following:

- Redevelop an underutilized vacant site by replacing an existing surface parking area with an economically viable and aesthetically attractive development that will be physically and programmatically compatible with the wide variety of urban uses in the vicinity in a manner that will help meet the goals of the City's Revised Long Range Property Management Plan.

- Create a pedestrian-friendly project by improving the portion of Victory Park located within the Project Site to create publicly accessible open space, introducing a pedestrian walkway that connects to the existing Convention Center Walkway, and improved streetscapes around the Project Site.

- Enhance access to and through Victory park while improving the programming and maintenance of the public park space.

- Provide public access to, enable the appreciation of and provide education regarding the historic Jergins Trust tunnel.

- Provide high-quality, signature architectural design that will enhance the downtown skyline and provide views of the Long Beach coastline and downtown environs.

- Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation.

Alternative 3 would meet the Project's underlying purpose to revitalize the Project Site by developing a high quality hotel that provides new lodging opportunities to serve the Long Beach community as well as publicly accessible restaurant and bar uses that encourage pedestrian activity in the vicinity of the Project Site and following Project objectives, but to a lesser extent than the Project because fewer hotel rooms are provided:

- Support and expand tourism and business activity in the Downtown Shoreline area by developing new lodging opportunities that are easily accessible to entertainment and commercial destinations in Long Beach to help meet the goals of the City's Blueprint for Economic Development and Local Coastal Program;

- Provide short-and long-term employment opportunities and generate transient occupancy tax and other revenue for the City.

- Provide a mix of convention-serving hotel, hotel amenity, and commercial uses adjacent to the Convention Center that will enhance the convention visitor experience and attract convention guests and bookings to Long Beach.

- Reduce vehicular trips promoting local, regional, and state mobility objectives and policies by developing a hotel use with convenient access to a variety of alternative transportation options including walking, biking, and public transit, and in close proximity to popular tourist destinations.

Overall, Alternative 3 would not fully meet the Project's underlying purpose and the objectives that support the Project's underlying purpose to the same extent as the Project, including meeting the City's broader objectives for the Project Site and the surrounding area under the City's Downtown Redevelopment Project, the Local Coastal Program, the Downtown Shoreline Planned Development District, and the Blueprint for Economic Development.

V. Alternatives

D. Alternative 4: PD-6 Zoning Compliant Residential Alternative

1. Description of the Alternative

Alternative 4, the PD-6 Zoning Compliant Residential Alternative, would develop roughly the same building proposed with the Project, but would include 450 residential units, 5,493 square feet of ground floor retail uses, and 9,507 square feet of ground-floor restaurant uses, compared to the 429-room hotel with 23,512 square feet of restaurant uses proposed by the Project. Like the Project, the proposed uses would be located in a single 537,075-square foot building 30 stories and 375.5 feet in height consisting of a tower over a podium, with new landscaping and outdoor amenity areas. The 450 residential units would consist of 67 studio units, 180 1-bedroom units, 180 2-bedroom units, and 23 3-bedroom units. A total of 731 vehicle parking spaces would be provided in a 7-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). Similar to the Project, an additional 280 parking spaces would be provided off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Alternative 4 would also provide four bicycle parking spaces located in the parking garage. Alternative 4 would include 67,500 square feet of open space consisting of landscaped courtyards and terraces, a sky deck, a pool deck, gym and yoga studio, library/music room, business center, trellised barbeque area, and dog run deck. Vehicular access to the on-site parking would be provided via driveways accessible from Seaside Way and Pine Avenue. The commercial loading dock and loading area are located immediately adjacent to the parking entrance off of Seaside Way. Like the Project, primary pedestrian access to the proposed uses would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Secondary pedestrian access would be provided via a small lobby located at the corner of Pine Avenue and Seaside Way. Like the Project, Alternative 4 would include improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet. However, Alternative 4 would not include access to and restoration of the Jergins Trust Tunnel.

2. Environmental Impact Analysis

a. Air Quality

(1) Construction

Alternative 4 would involve the same amount of demolition and grading/excavation as the Project, and the same amount of construction because of the similar building size. As with the Project, construction of this Alternative would generate air emissions through the use of heavy-duty construction equipment and haul truck and construction worker trips. With a similar amount of demolition, excavation, and development, intensity of air emissions and fugitive dust from site preparation and construction activities would be similar on days with maximum construction activities. Therefore, regional and localized impacts on these days would be similar to those of the Project and therefore less than significant. Similarly, the amount of site grading and excavation on maximum activity days would be similar to levels proposed under the Project. Impacts would be similar to the Project and less than significant with mitigation.

With respect to TAC emissions, diesel particulate emissions represent the greatest potential for TAC emissions. As Alternative 4 would be similar in scale compared to the Project, impacts due to TAC emissions and the corresponding individual cancer risk would be similar to the Project's less than significant impacts.

(2) Operation

Similar to the Project, operational regional air pollutant emissions associated with Alternative 4 would be generated by vehicle trips to the Project Site and the consumption of electricity and natural gas. As discussed further below, when accounting for pass-by trips and internal capture reductions, Alternative 4 would generate 2,286 daily trips compared to 4,905 daily trips with the Project.[13] As vehicular emissions depend on the number of trips, vehicular sources would result in a smaller increase in air emissions compared to the Project. Although the overall square footage would be similar to the Project, demand for electricity and natural gas would be slightly greater than the Project due to the inclusion of residential uses. However, operational emissions would remain below significance thresholds. Therefore, impacts with respect to regional operational emissions would be less than the less-than-significant impacts of the Project.

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[13] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

With regard to on-site localized area source and stationary source emissions, as with the Project, Alternative 4 would not introduce any major new sources of air pollution within the Project Site. Therefore, similar to the Project, localized impacts from on-site emission sources associated with Alternative 4 would also be less than significant. Such impacts would be similar to the Project due to the similar building size. Localized mobile source operational impacts are determined mainly by peak-hour intersection traffic volumes. As discussed further below in Section V.D.2.e.(2), the number of net new peak-hour trips generated with Alternative 4 would be less than the Project.[14] Therefore, impacts would be less than the less-than-significant impacts of the Project.

b. Cultural Resources—Historic

Unlike the Project, Alternative 4 would not reconnect the Project Site with the Jergins Trust Tunnel, a subterranean walkway previously associated with the Jergins Trust Building that extends from the Project Site to the north side of Ocean Boulevard near a sub-grade level of the Renaissance hotel north of Ocean Boulevard. However, ground movement and vibration from construction of Alternative 4 may have the potential to damage the tunnel. Similar to the Project, these impacts would be mitigated to a less than significant level with implementation of mitigation equivalent to Mitigation Measure HIS-2. Impacts would be less than significant with mitigation, though less than the Project because no work would take place in the tunnel itself.

c. Greenhouse Gas Emissions

Similar to the Project, Alternative 4 would incorporate sustainability features to reduce GHG emissions and comply with the City of Long Beach Green Building Ordinance, as applicable, as well as to achieve LEED Silver® Certification. Similar to the Project, Alternative 3 would also incorporate features and comply with regulatory measures consistent with the goals of AB 32. Like the Project, Alternative 4 would promote implementation of SB 375 and support regional land use and transportation GHG reductions consistent with state regulatory requirements for 2020 and 2035. Although Alternative 4 would have a similar amount of floor area compared to the Project, the amount of natural gas, electricity, and water consumption, as well as wastewater generation, would be slightly greater than the Project due to the inclusion of residential uses. Furthermore, the mix of uses under Alternative 4 would result in a reduction in average daily trips as compared to the Project. Even with the increase in energy and water usage emissions, total GHG emissions generated by Alternative 4 would be less than the

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14 *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

Project. Overall, GHG impacts would be less than significant and less than the Project's less than significant impacts.

d. Noise

(1) Construction

As with the Project, construction of Alternative 4 would generate noise from the use of heavy-duty construction equipment, as well as from haul truck and construction worker trips. The overall amount of building construction would be similar to the Project and construction noise impacts would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring significance, Alternative-level on-site noise impacts on these days would be similar to those of the Project, which would be less than significant with mitigation. However, like the Project, due to the location of related projects in the area, cumulative on-site noise impacts associated with construction would be significant and unavoidable.

With respect to off-site noise impacts from haul trucks, because the total amount of development is similar to the Project, the same number and frequency of haul trucks is anticipated. Impacts would be similar to the Project and less than significant.

Similar to the Project, vibration would be generated during the construction of Alternative 4 from the use heavy-duty construction equipment and haul truck trips. Maximum daily activities during the demolition and excavation phases, which typically generate the highest vibration levels, would be similar to levels expected under the Project. Therefore, similar to the Project, vibration levels from on-site construction activities associated with Alternative 4 are anticipated to be well below the significance thresholds for building damage and human annoyance. Haul truck trips on maximum activity days would be similar to levels under the Project. As such, vibration impacts from off-site sources would be less than significant and similar to those of the Project. Overall, impacts related to construction vibration levels would be less than significant and similar to the Project.

(2) Operation

As described in Section IV.D, Noise, of this Draft EIR, sources of operational noise include: (a) on-site stationary noise sources, which consist of outdoor mechanical equipment (i.e., rooftop condenser units), activities associated with the outdoor spaces, and parking facilities; and (b) off-site mobile (roadway traffic) noise sources. Alternative 2 would include the same sources of operational noise. Given the similar building size and design, noise from outdoor mechanical equipment would be similar to the Project.

Alternative 4 would include more open space than the Project (80,658 square feet including improvements to Victory Park compared to 37,404 square feet with the Project), so noise from outdoor spaces would be greater than the Project. However, the estimated noise levels at all off-site receptors would be below the significance threshold of 5 dBA (L_{eq}) above ambient noise levels. Noise from parking facilities would be greater than the Project due to the increased number of vehicle parking spaces. Specifically, Alternative 4 would include 731 on-site parking spaces and 280 off-site parking spaces compared to 151 on-site parking spaces and 280 off-site parking spaces with the Project. However, noise from on- and off-site parking lots would be regulated by LBMC Chapter 8.80, which limits noise generated by motor vehicles within parking facilities and because the number of off-site parking spaces would be the same as the Project, noise levels along Ocean Boulevard and Seaside Way would be similar to the Project. Based on the above, on-site noise impacts under Alternative 4 would be less than significant, but greater than the Project due to additional open space and noise from on-site parking.

Alternative 4 would result in 2,569 daily trips compared to 6,224 daily trips with the Project, without accounting for pass-by trips or internal capture.[15,16] Accordingly, off-site noise impacts associated with traffic would be less than the Project's less-than-significant impacts.

e. Transportation/Traffic

(1) Construction

As with the Project, construction of Alternative 4 would generate additional trips from heavy-duty construction equipment, haul trucks, and construction worker trips and the overall amount of demolition, excavation, and construction would be similar to the Project. Also similar to the Project, Alternative 4 would prepare and implement a Construction Traffic Management Plan to reduce resulting effects on the surrounding community including impacts to traffic, access, and public transit. As shown in Table 8 of the Traffic Study included as Appendix E.1 of this Draft EIR, with the addition of truck trips during construction, all study intersections along the haul route would still operate at LOS A. Therefore, since the amount of construction anticipated with Alternative 4 is similar to the Project, construction traffic impacts would also be similar to the Project and remain less than significant.

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15 *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

16 *The Noise analysis presented in Section IV.D of this Draft EIR evaluated Project trip generation without reductions for pass-by trips and internal capture to present a conservative scenario.*

(2) Operation

Accounting for pass-by trips and internal capture reductions, Alternative 4 would generate 2,286 daily trips including 147 A.M. peak-hour trips and 191 P.M. peak-hour trips compared to 4,905 daily trips including 319 A.M. peak-hour trips and 372 P.M. peak-hour trips with the Project.[17] Therefore, impacts to the local roadway network would be less than the less-than-significant impacts of the Project. Additionally, with the reduced number of trips, impacts to the regional transportation system, access and circulation, and bicycle, pedestrian, and vehicular safety would be less than the less-than-significant impacts of the Project.

With respect to vehicle queuing, Alternative 4 does not include hotel uses or a valet staging area. Accordingly, impacts associated with vehicle queuing would be less than significant and less than the Project's less-than-significant-with-mitigation impacts.

3. Comparison of Impacts

Alternative 4 is included in this alternatives analysis based on its potential to reduce the significant impacts of the Project. As described above, Alternative 4 would result in greater impacts to operational noise than the Project, but this impact would remain less than significant. However, Alternative 4 would not avoid the Project's significant and unavoidable impact related to cumulative construction noise. All other impacts would be similar to or less than the Project's impacts.

4. Relationship of the Alternative to Project Objectives

As discussed above, Alternative 4 would develop 450 residential units, 5,493 square feet of ground floor retail uses, and 9,507 square feet of ground-floor restaurant uses, compared to the 429-room hotel with 23,512 square feet of restaurant uses proposed by the Project. Like the Project, Alternative 4 would include improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet. However, Alternative 4 would not include access to and restoration of the Jergins Trust Tunnel. As such, Alternative 4 would not meet the Project's underlying purpose to revitalize the Project Site by developing a high quality hotel that provides new lodging opportunities to serve the Long Beach community as well as publicly accessible restaurant

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[17] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

and bar uses that encourage pedestrian activity in the vicinity of the Project Site or any of the objectives related to hotel uses:

- Support and expand tourism and business activity in the Downtown Shoreline area by developing new lodging opportunities that are easily accessible to entertainment and commercial destinations in Long Beach to help meet the goals of the City's Blueprint for Economic Development and Local Coastal Program;
- Reduce vehicular trips promoting local, regional, and state mobility objectives and policies by developing a hotel use with convenient access to a variety of alternative transportation options including walking, biking, and public transit, and in close proximity to popular tourist destinations.
- Provide a mix of convention-serving hotel, hotel amenity, and commercial uses adjacent to the Convention Center that will enhance the convention visitor experience and attract convention guests and bookings to Long Beach.

Alternative 4 would also not meet the Project's objective to provide access to the Jergins Trust Tunnel:

- Provide public access to, enable the appreciation of and provide education regarding the historic Jergins Trust tunnel.

Alternative 4 would provide short-term and long-term employment opportunities, but would not generate transient occupancy tax for the City:

- Provide short-and long-term employment opportunities and generate transient occupancy tax and other revenue for the City.

Alternative 4 would, however, meet the following Project objectives to the same extent as the Project:

- Redevelop an underutilized vacant site by replacing an existing surface parking area with an economically viable and aesthetically attractive development that will be physically and programmatically compatible with the wide variety of urban uses in the vicinity in a manner that will help meet the goals of the City's Revised Long Range Property Management Plan.
- Create a pedestrian-friendly project by improving the portion of Victory Park located within the Project Site to create publicly accessible open space, introducing a pedestrian walkway that connects to the existing Convention Center Walkway, and improved streetscapes around the Project Site.

- Enhance access to and through Victory park while improving the programming and maintenance of the public park space.

- Provide high-quality, signature architectural design that will enhance the downtown skyline and provide views of the Long Beach coastline and downtown environs.

- Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation.

Overall, Alternative 4 would not meet the Project’s underlying purpose or the objectives that support the Project’s underlying purpose because no hotel use is proposed. Alternative 4 would, however, meet a number of the Project’s other objectives to the same extent as the Project.

V. Alternatives

E. Alternative 5: PD-6 Zoning Compliant Office Alternative

1. Description of the Alternative

Alternative 5, the PD-6 Zoning Compliant Office Alternative, would develop roughly the same building proposed with the Project, but would include 265,000 square feet of office uses, 9,887 square feet of ground floor retail uses, and 17,113 square feet of ground floor restaurant uses, compared to the 429-room hotel with 23,512 square feet of restaurant uses proposed by the Project. Like the Project, the proposed uses would be located in a single building 30 stories and 375.5 feet in height consisting of a tower over a podium, with new landscaping and outdoor amenity areas. A total of 898 vehicle parking spaces would be provided in a 9-level parking garage, with primary access from Seaside Way and secondary access from Pine Avenue (both with driveways on Level 1, connecting to subterranean level P1). Similar to the Project, an additional 280 parking spaces would be provided off-site at the existing Terrace Theater Parking Garage, approximately 0.2 mile southeast of the Project Site. Alternative 5 would also provide 14 bicycle parking spaces located in the parking garage. Alternative 5 would include approximately 5,000 square feet of open space consisting of landscaped courtyards and terraces. Vehicular access to the on-site parking would be provided via driveways accessible from Seaside Way and Pine Avenue. The commercial loading dock and loading area are located immediately adjacent to the parking entrance off of Seaside Way. Like the Project, primary pedestrian access to the proposed uses would be provided via the main entrance facing Ocean Boulevard and Victory Park on Level 3. Secondary pedestrian access would be provided via a small lobby located at the corner of Pine Avenue and Seaside Way. Like the Project, Alternative 5 would include access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet.

2. Environmental Impact Analysis

a. Air Quality

(1) Construction

Alternative 5 would involve the same amount of demolition and grading/excavation as the Project, but less construction because of the reduced building size. As with the Project, construction of this Alternative would generate air emissions through the use of heavy-duty construction equipment and haul truck and construction worker trips. The duration of the construction period and the intensity of air emissions and fugitive dust associated with site preparation and construction activities would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring significance, regional and localized impacts on these days would be similar to those of the Project and therefore less than significant. Similarly, the amount of site grading and excavation on maximum activity days would be similar to levels proposed under the Project. Thus, on an overall comparative basis, since Alternative 5 would emit a similar amount of pollutants over a similar construction duration, impacts would be similar to the Project's less-than-significant-with-mitigation impacts.

With respect to TAC emissions, diesel particulate emissions represent the greatest potential for TAC emissions. As Alternative 5 would be smaller in scale than the Project, impacts due to TAC emissions and the corresponding individual cancer risk would be less than the Project's less-than-significant impacts.

(2) Operation

Similar to the Project, operational regional air pollutant emissions associated with Alternative 5 would be generated by vehicle trips to the Project Site and the consumption of electricity and natural gas. As discussed further below, when accounting for pass-by trips and internal capture reductions, Alternative 5 would generate 2,445 daily trips compared to 4,905 daily trips with the Project.[18] As vehicular emissions depend on the number of trips, vehicular sources would result in a smaller increase in air emissions compared to the Project. In addition, because the overall square footage would be less than the Project, demand for electricity and natural gas would also be similar to the Project. Therefore, impacts with respect to regional operational emissions would be less than the less-than-significant impacts of the Project.

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[18] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

With regard to on-site localized area source and stationary source emissions, as with the Project, Alternative 5 would not introduce any major new sources of air pollution within the Project Site. Therefore, similar to the Project, localized impacts from on-site emission sources associated with Alternative 5 would also be less than significant. Such impacts would be less than the Project due to the reduced building size. Localized mobile source operational impacts are determined mainly by peak-hour intersection traffic volumes. As discussed further below in Section V.E.2.e.(2), the number of net new peak-hour trips generated with Alternative 5 would be less than the Project.[19] Therefore, impacts would be less than the less-than-significant impacts of the Project.

Also similar to the Project, Alternative 5 would not release substantial amounts of TACs. Thus, like the Project, this Alternative would result in a less than significant air quality impact related to TACs. In addition, as with the Project, development of Alternative 5 would be consistent with the air quality policies set forth in the SCAQMD's Air Quality Management Plan (AQMP) and the City of Long Beach General Plan Air Quality Element, resulting in a less than significant impact.

b. Cultural Resources—Historic

Similar to the Project, Alternative 5 would reconnect the Project Site with the Jergins Trust Tunnel, a subterranean walkway previously associated with the Jergins Trust Building that extends from the Project Site to the north side of Ocean Boulevard near a sub-grade level of the Renaissance hotel north of Ocean Boulevard (the north end of the tunnel would not be reopened as part of Alternative 5). The tunnel would be used for educational tours, and interpretive signage and images would be introduced to describe the tunnel's history. Alternative 5 would therefore have the same potential as the Project to materially alter historic aspects of the tunnel and ground movement and vibration from construction of Alternative 5 may have the potential to damage the tunnel. However, similar to the Project, these impacts would be mitigated to a less than significant level with implementation of Mitigation Measures HIS-1 and HIS-2. Impacts would be less than significant with mitigation, similar to the Project.

c. Greenhouse Gas Emissions

Similar to the Project, Alternative 5 would incorporate sustainability features to reduce GHG emissions and comply with the City of Long Beach Green Building Ordinance, as applicable, as well as to achieve LEED Silver® Certification. Similar to the Project,

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[19] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

Alternative 5 would also incorporate features and comply with regulatory measures consistent with the goals of AB 32. Like the Project, Alternative 5 would promote implementation of SB 375 and support regional land use and transportation GHG reductions consistent with state regulatory requirements for 2020 and 2035. Furthermore, Alternative 5 would include less overall development than the Project, which would result in a reduction in the amount of water consumption and wastewater generation, as well as a reduction in the number of daily trips. Overall, GHG impacts would be less than significant and less than the Project's less than significant impacts.

d. Noise

(1) Construction

As with the Project, construction of Alternative 5 would generate noise from the use of heavy-duty construction equipment, as well as from haul truck and construction worker trips. While the overall amount of building construction would be less than Project, construction noise impacts would be similar on days with maximum construction activities. Because maximum daily conditions are used for measuring significance, Alternative-level noise impacts on these days would be similar to those of the Project, which would be less than significant with mitigation. However, like the Project, due to the location of related projects in the area, cumulative noise impacts associated with construction would be significant and unavoidable.

With respect to off-site noise impacts from haul trucks, while the overall amount of development would be less than the Project, haul truck trips on maximum activity days would be similar to levels under the Project. Impacts would be similar to the Project and less than significant.

Similar to the Project, vibration would be generated during the construction of Alternative 5 from the use heavy-duty construction equipment and haul truck trips. Maximum daily activities during the demolition and excavation phases, which typically generate the highest vibration levels, would be similar to levels expected under the Project. Therefore, similar to the Project, vibration levels from on-site construction activities associated with Alternative 3 are anticipated to be well below the significance thresholds for building damage and human annoyance. Haul truck trips on maximum activity days would be similar to levels under the Project. As such, vibration impacts from off-site sources would be less than significant and similar to those of the Project. Overall, impacts related to construction vibration levels would be less than significant and similar to the Project.

(2) Operation

As described in Section IV.D, Noise, of this Draft EIR, sources of operational noise include: (a) on-site stationary noise sources, which consist of outdoor mechanical equipment (i.e., rooftop condenser units), activities associated with the outdoor spaces, and parking facilities; and (b) off-site mobile (roadway traffic) noise sources. Alternative 5 would include the same sources of operational noise. Given a similar building size and design, noise from outdoor mechanical equipment would be similar to the Project. Alternative 5 would include less open space than the Project (18,158 square feet including improvements to Victory Park compared to 37,404 square feet with the Project), so noise from outdoor spaces would be less than the Project. Noise from parking facilities would be greater than the Project due to the increased number of vehicle parking spaces. Specifically, Alternative 5 would include 898 on-site parking spaces and 280 off-site parking spaces compared to 151 on-site parking spaces and 280 off-site parking spaces with the Project. However, noise from on- and off-site parking lots would be regulated by LBMC Chapter 8.80, which limits noise generated by motor vehicles within parking facilities and because the number of off-site parking spaces would be the same as the Project, noise levels along Ocean Boulevard and Seaside Way would be similar to the Project. Based on the above, on-site noise impacts under Alternative 5 would be less than significant, but greater than the Project due to additional noise from on-site parking.

Alternative 5 would result in 3,600 daily trips compared to 6,224 daily trips with the Project, without accounting for pass-by trips or internal capture.[20,21] Accordingly, off-site noise impacts associated with traffic would be less than the Project's less-than-significant impacts.

e. Transportation/Traffic

(1) Construction

As with the Project, construction of Alternative 5 would generate additional trips from heavy-duty construction equipment, haul trucks, and construction worker trips and the overall amount of demolition, excavation, and construction would be similar to the Project. Also similar to the Project, Alternative 5 would prepare and implement a Construction Traffic Management Plan to reduce resulting effects on the surrounding community including impacts to traffic, access, and public transit. As shown in Table 8 of the Traffic

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[20] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

[21] *The Noise analysis presented in Section IV.D of this Draft EIR evaluated Project trip generation without reductions for pass-by trips and internal capture to present a conservative scenario.*

Study included as Appendix E.1 of this Draft EIR, with the addition of truck trips during construction, all study intersections along the haul route would still operate at LOS A. Therefore, since the amount of construction anticipated with Alternative 5 is similar to the Project, construction traffic impacts would also be similar to the Project and remain less than significant.

(2) Operation

Accounting for pass-by trips and internal capture reductions, Alternative 5 would generate 2,445 daily trips including 243 A.M. peak-hour trips and 280 P.M. peak-hour trips compared to 4,905 daily trips including 319 A.M. peak-hour trips and 372 P.M. peak-hour trips with the Project.[22] Therefore, impacts to the local roadway network would be less than the less-than-significant impacts of the Project. Additionally, with the reduced number of trips, impacts to the regional transportation system, access and circulation, and bicycle, pedestrian, and vehicular safety would be less than the less-than-significant impacts of the Project.

With respect to vehicle queuing, Alternative 5 does not include hotel uses or a valet staging area. Accordingly, impacts associated with vehicle queuing would be less than significant and less than the Project's less-than-significant-with-mitigation impacts.

3. Comparison of Impacts

Alternative 5 is included in this alternatives analysis based on its potential to reduce the significant impacts of the Project. As described above, Alternative 5 would result in greater impacts to operational noise than the Project, but this impact would remain less than significant. However, Alternative 5 would not avoid the Project's significant and unavoidable impact related to cumulative construction noise. All other impacts would be similar to or less than the Project's impacts.

4. Relationship of the Alternative to Project Objectives

As discussed above, Alternative 5 would develop 265,000 square feet of office uses, 9,887 square feet of ground floor retail uses, and 17,113 square feet of ground floor restaurant uses, compared to the 429-room hotel with 23,512 square feet of restaurant uses proposed by the Project. Additionally, like the Project, Alternative 5 would include

[22] *Fehr & Peers, 100 E. Ocean Traffic Study – Alternatives Analysis, July 9, 2019. Refer to Appendix F of this Draft EIR.*

access to and restoration of the Jergins Trust Tunnel and improvements to the portion of Victory Park located within the Project Site boundaries totaling 13,158 square feet. As such, Alternative 5 would not meet the Project's underlying purpose to revitalize the Project Site by developing a high quality hotel that provides new lodging opportunities to serve the Long Beach community as well as publicly accessible restaurant and bar uses that encourage pedestrian activity in the vicinity of the Project Site or any of the objectives related to hotel uses:

- Support and expand tourism and business activity in the Downtown Shoreline area by developing new lodging opportunities that are easily accessible to entertainment and commercial destinations in Long Beach to help meet the goals of the City's Blueprint for Economic Development and Local Coastal Program;
- Reduce vehicular trips promoting local, regional, and state mobility objectives and policies by developing a hotel use with convenient access to a variety of alternative transportation options including walking, biking, and public transit, and in close proximity to popular tourist destinations.
- Provide short-and long-term employment opportunities and generate transient occupancy tax and other revenue for the City.
- Provide a mix of convention-serving hotel, hotel amenity, and commercial uses adjacent to the Convention Center that will enhance the convention visitor experience and attract convention guests and bookings to Long Beach.

Alternative 5 would provide short-term and long-term employment opportunities, but would not generate transient occupancy tax for the City:

- Provide short-and long-term employment opportunities and generate transient occupancy tax and other revenue for the City.

Alternative 5 would, however, meet the following Project objectives to the same extent as the Project:

- Redevelop an underutilized vacant site by replacing an existing surface parking area with an economically viable and aesthetically attractive development that will be physically and programmatically compatible with the wide variety of urban uses in the vicinity in a manner that will help meet the goals of the City's Revised Long Range Property Management Plan.
- Create a pedestrian-friendly project by improving the portion of Victory Park located within the Project Site to create publicly accessible open space,

introducing a pedestrian walkway that connects to the existing Convention Center Walkway, and improved streetscapes around the Project Site.

- Enhance access to and through Victory park while improving the programming and maintenance of the public park space.

- Provide public access to, enable the appreciation of and provide education regarding the historic Jergins Trust tunnel.

- Provide high-quality, signature architectural design that will enhance the downtown skyline and provide views of the Long Beach coastline and downtown environs.

- Demonstrate environmental leadership and reduce environmental impacts through the integration of sustainability features into building design and operation.

Overall, Alternative 5 would not meet the Project’s underlying purpose or the objectives that support the Project’s underlying purpose because no hotel use is proposed. Alternative 5 would, however, meet a number of the Project’s other objectives to the same extent as the Project.

V. Alternatives

F. Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) indicates that an analysis of alternatives to a project shall identify an Environmentally Superior Alternative among the alternatives evaluated in an EIR. The CEQA Guidelines also state that should it be determined that the No Project Alternative is the Environmentally Superior Alternative, the EIR shall identify another Environmentally Superior Alternative among the remaining alternatives.

Table V-1 on page V-5 provides a summary matrix that compares the impacts associated with the Project with the impacts of each of the analyzed alternatives. A more detailed description of the potential impacts associated with each alternative is provided above. Pursuant to CEQA Guidelines Section 15126.6(c), the analysis below addresses the ability of the alternatives to "avoid or substantially lessen one or more of the significant effects" of the Project.

As previously discussed, the Project would result in a significant and unavoidable impact related to cumulative construction noise. Alternative 1 would avoid all of the Project's significant impact related to cumulative construction noise. However, the No Project/No Build Alternative would not meet any of the Project objectives or achieve the Project's underlying purpose to revitalize the Project Site by developing a high quality hotel that provides new lodging opportunities to serve the Long Beach community as well as publicly accessible restaurant and bar uses that encourage pedestrian activity in the vicinity of the Project Site.

As stated above, the CEQA Guidelines require the identification of an Environmentally Superior Alternative other than a No Project Alternative. In accordance with the CEQA Guidelines, a comparative evaluation of the remaining alternatives indicates that Alternative 5, the PD-6 Zoning Compliant Office Alternative, would reduce the Project's less than significant impacts to the greatest extent. However, Alternative 5 would not avoid the Project's significant and unavoidable impact with respect to cumulative construction noise and impacts with respect to on-site operational noise would be greater than the Project, but remain less than significant.

Specifically, because Alternative 5 would result in the fewest daily trips of the build alternatives, impacts with respect to operational air quality, greenhouse gas emissions, off-site operational noise, and traffic would be less than the Project. Impacts with respect to construction air quality, historic resources, construction noise, and construction traffic would be similar to the Project.

However, Alternative 5 would not meet the Project's underlying purpose to revitalize the Project Site by developing a high quality hotel that provides new lodging opportunities to serve the Long Beach community as well as publicly accessible restaurant and bar uses that encourage pedestrian activity in the vicinity of the Project Site or any of the objectives related to hotel uses.

VI. Other CEQA Considerations

VI. Other CEQA Considerations

1. Significant Unavoidable Impacts

CEQA Guidelines Section 15126.2(b) requires that an Environmental Impact Report (EIR) describe any significant impacts which cannot be avoided. Specifically, Section 15126.2 (b) states:

> *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.*

Based on the analysis in Section IV, Environmental Impact Analysis, of this Draft EIR, implementation of the Project would result in significant impacts that cannot be feasibly mitigated with respect to cumulative construction-related noise. Accordingly, cumulative construction noise impacts would be significant and unavoidable. All other Project-specific and cumulative impacts would be less than significant or mitigated to a less than significant level.

a. Noise

As discussed in Section IV.D, Noise, of this Draft EIR, if nearby Related Project Nos. 25, 42, and 45 were to be constructed concurrently with the Project, significant construction noise impacts could result. In particular, implementation of Mitigation Measures NOI-1 through NOI-3 would reduce potential cumulative impacts at Receptors R1 and R2. The estimated noise reductions attributable to Mitigation Measures NOI-1 and NOI-2, although not easily quantifiable, would reduce noise impacts associated with on-site construction activities to the extent feasible. However, cumulative construction noise impacts would remain significant and unavoidable.

2. Reasons Why the Project is Being Proposed, Notwithstanding Significant Unavoidable Impacts

In addition to identification of a project's significant unavoidable impacts, CEQA Guidelines Section 15126.2(b) requires that an EIR describe the reasons why a project is being proposed, notwithstanding the effects of the identified significant and unavoidable impacts.

The reasons why the Project has been proposed are grounded in a comprehensive list of Project objectives included in Section II, Project Description, of this Draft EIR and are further described below. The underlying purpose of the Project is to support and expand tourism and business activity in the Downtown Shoreline area by developing new lodging opportunities that are easily accessible to entertainment and commercial destinations in Long Beach. Under existing conditions, the Project Site is developed as a surface parking lot. The Project would replace the surface parking area with an economically productive development that would be compatible with the various urban uses in the surrounding vicinity. The Project would provide short- and long-term employment opportunities and generate transient occupancy tax and other revenues for the City. The Project would reduce typical hotel-related vehicular trips by developing a hotel use with convenient access to pedestrian, biking, and public transit facilities in close proximity to popular tourist destinations. The Project would provide public access to and enable the appreciation of the historic Jergins Trust tunnel. The Project would also provide high-quality, signature architectural design that would enhance the downtown skyline. In addition, the Project would further the goals of the Downtown Shoreline Plan, Long Beach Strategic Plan, and the City's former Downtown Redevelopment Plan.

3. Significant Irreversible Environmental Changes

In accordance with CEQA Guidelines Section 15126.2(c), an EIR is required to evaluate significant irreversible environmental changes that would be caused by implementation of the proposed project. As stated in CEQA Guidelines Section 15126.2(d):

> *[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvements which provide access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable*

commitments of resources should be evaluated to assure that such current consumption is justified.

The Project would necessarily consume limited, slowly renewable, and non-renewable resources, resulting in irreversible environmental changes. This consumption would occur during construction of the Project and would continue throughout its operational lifetime. Development of the Project would require a commitment of resources that would include: (1) building materials and associated solid waste disposal effects on landfills; (2) water; and (3) energy resources (e.g., fossil fuels) for electricity, natural gas, and transportation and the associated impacts related to air quality and greenhouse gas emissions.

a. Building Materials and Solid Waste

Construction of the Project would require the consumption of resources that do not replenish themselves or which may renew so slowly as to be considered non-renewable. These resources would include certain types of lumber and other forest products, aggregate materials used in concrete and asphalt (e.g., sand, gravel and stone), metals (e.g., steel, copper and lead), and petrochemical construction materials (e.g., plastics).

During construction and operation of the Project, the Project would comply with Assembly Bill (AB) 939, which emphasizes resource conservation through reduction, recycling, and reuse of solid waste. During operation, the Project would also comply with AB 341 which promotes commercial recycling and AB 1826 which requires organic waste recycling. Additionally, the City of Long Beach Department of Public Works, Environmental Services Bureau implements several waste reduction programs, including the Litter-Free Long Beach Campaign, which is designed to expand awareness of the impacts of litter, build community pride, and develop the support and participation of Long Beach residents, schools, and businesses. The Project would be consistent with the applicable regulations associated with solid waste. Specifically, the Project would comply with AB 939, AB 341, AB 1826, and City goals, as applicable, through measures such as the provision of on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials and adequate storage areas for such containers during construction and after the building is occupied; use of building materials with a minimum of 10 percent recycled content for Project construction; and implementation of a construction waste management plan to recycle and/or salvage a minimum of 75 percent of nonhazardous construction debris or minimize the generation of construction waste to 2.5 pounds per square foot of building floor area, which exceeds the California Green Building Standards (CalGreen Code). Thus, the consumption of non-renewable building materials, such as lumber, aggregate materials, and plastics, would be reduced. Furthermore, as discussed in the Initial Study prepared for the Project and included as

Appendix A of this Draft EIR, Project impacts with respect to solid waste generation and compliance with federal, state, and local solid waste regulations would be less than significant.

b. Water

The Project's water use during construction and operation is addressed in the Initial Study prepared for the Project, which is included as Appendix A of this Draft EIR. As discussed therein, development of the Project would result in an increase in long-term water demand due to water consumption, building operations, maintenance, and other activities on the Project Site. The Project's operational water demand would fall within the projected water supplies for average, single-dry, and multiple-dry years, and the Long Beach Water Department (LBWD) would be able to meet the water demand for the Project in addition to the existing and future water demands of its service area. Furthermore, the Project would incorporate "green" principles to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013), and the Project has been designed to achieve the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver® certification. Proposed water conservation features would include, but would not be limited to, high-efficiency fixtures; Energy Star-rated dishwashers and clothes washers; individual metering and billing for water use for the restaurant; prohibition of single-pass cooling equipment; installation of cooling tower automatic water treatment; and installation of a separate water meter, flow sensor, and master valve shutoff for irrigated landscape areas totaling 5,000 square feet or greater. Thus, as evaluated in the Initial Study, while Project operation would result in the irreversible consumption of water, the Project would not result in a significant impact related to water supply.

c. Energy Consumption and Air Quality

Project consumption of non-renewable fossil fuels for energy use during construction and operation of the Project is addressed in the Initial Study prepared for the Project, included as Appendix A of this Draft EIR. During Project construction, fossil fuels, such as diesel, gasoline, and oil, would be consumed by construction vehicles and equipment. Construction activities for the Project would not require the consumption of natural gas but would require the use of electricity. As the consumption of fossil fuels would occur on a temporary basis during construction, impacts related to the construction consumption of fossil fuels would be less than significant. During ongoing operations, non-renewable fossil fuels would represent the primary energy source, and thus the existing finite supplies of these resources would be incrementally reduced.

As evaluated in the Initial Study, the Project's increase in electricity and natural gas demand would be within the anticipated service capabilities of Long Beach Energy

Resources (LBER) Department and Southern California Edison (SCE), respectively. In addition, the estimates of electricity and natural gas consumption are conservative and do not factor in reductions in consumption resulting from the implementation of energy conservation features. Specifically, as discussed in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, "green" principles are incorporated throughout the Project to comply with the City of Long Beach Green Building Ordinance (Ordinance No. ORD-09-0013), and the Project has been designed to achieve LEED Silver® certification). Energy conservation features incorporated into the Project design would include, but would not be limited to, the use of full-cutoff or fully shielded on-street lighting; use of light emitting diode lighting; incorporation of energy-efficient design methods and technologies; inclusion of outdoor air flow measuring devices and operable windows with high performance glazing; insulated plumbing and mechanical pipes; occupancy-based hotel room energy management systems; and post-construction commissioning of building energy systems performed on an ongoing basis to ensure all systems are running at optimal efficiency.[1] Implementation of energy conservation features would ensure energy would not be used in a wasteful manner, and long-term impacts associated with the consumption of fossil fuels would not be significant.

d. Environmental Hazards

The Project's potential use of hazardous materials is addressed in the Initial Study prepared for the Project, included as Appendix A of this Draft EIR. As evaluated therein, the types and amounts of hazardous materials that would be used in connection with construction of the Project would be typical of those used during construction of commercial developments, including vehicle fuels, paints, oils, and transmission fluids. Similarly, the types and amounts of hazardous materials used during operation of the proposed hotel and restaurant uses would be typical of such developments and would include cleaning solvents, pesticides for landscaping, painting supplies, and petroleum products. Furthermore, all potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable federal, State, and local regulations. Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations. Compliance with regulations and standards would serve to protect against significant and irreversible environmental changes that could result from the accidental release of hazardous materials.

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[1] *Refer to Section II, Project Description, of this Draft EIR for a complete list of energy efficiency measures included as part of the Project.*

e. Conclusion

Based on the above, Project construction and operation would require the irretrievable commitment of limited, slowly renewable, and non-renewable resources, which would limit the availability of these resources and the Project Site for future generations or for other uses. However, the consumption of such resources would not be considered substantial and would be consistent with regional and local growth forecasts and development goals for the area. The loss of such resources would not be highly accelerated when compared to existing conditions, and such resources would not be used in a wasteful manner. Therefore, although irreversible environmental changes would result from the Project, such changes are concluded to be less than significant.

4. Growth-Inducing Impacts

CEQA Guidelines Section 15126.2(d) requires that growth-inducing impacts of a project be considered in a Draft EIR. Growth-inducing impacts are characteristics of a project that could directly or indirectly foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. According to the CEQA Guidelines, such projects include those that would remove obstacles to population growth (e.g., a major expansion of a wastewater treatment plant that, for example, may allow for more construction in service areas). In addition, as set forth in the CEQA Guidelines, increases in the population may tax existing community service facilities, thus requiring the construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also require a discussion of the characteristics of projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Finally, the CEQA Guidelines state that it must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment. Growth can be induced or fostered as follows:

- Direct growth associated with a project;
- Indirect growth created by either the demand not satisfied by a project or the creation of surplus infrastructure not utilized by a project.

The Project would construct a new 537,075-square-foot hotel with 429 rooms, 23,512 square feet of restaurant uses, and 26,847 square feet of meeting rooms, ballrooms, and pre-function space. The Project would not introduce a new residential population to the area but would introduce a daytime population of visitors to Project Site. Therefore, the Project would not directly contribute to population growth in the Project area. In addition, since most of the employment opportunities generated by the Project would be filled by people already residing in the general vicinity, the potential growth associated with Project employees who may relocate their place of residence would not be substantial. Accordingly, the Project would be well within the Southern California Association of Governments' (SCAG's) population projection for the Los Angeles Subregion.

With regard to employment, the Project would support tourism and business activity for residents and visitors to the area. The Project would not cause an exceedance of SCAG's employment projections, nor would it induce substantial indirect population or housing growth related to Project-generated employment opportunities.

Construction workers would not be expected to relocate their households' places of residence as a direct consequence of working on the Project as the work requirements of most construction projects are highly specialized so that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process. Therefore, given the availability of construction workers, the Project would not be considered growth inducing from a short-term employment perspective, but rather the Project would provide a public benefit by providing new employment opportunities during the construction period.

The area surrounding the Project Site is already developed with primarily commercial land uses. The Project would not remove impediments to growth. While the Project may require local infrastructure upgrades to maintain and improve water, sewer, electricity, and natural gas lines on-site and in the immediate vicinity, such improvements would be intended primarily to meet Project-related demand and would not necessitate regional utility infrastructure improvements that have not otherwise been accounted for and planned for on a regional level. In addition, Project access improvements would be limited to driveways necessary to provide immediate access to the Project Site.

Overall, the Project would be consistent with the growth forecast for the Los Angeles Subregion and would be consistent with regional policies to reduce urban sprawl, efficiently utilize existing infrastructure, reduce regional congestion, and improve air quality. Therefore, growth-inducing impacts would be less than significant.

5. Potential Secondary Effects

CEQA Guidelines Section 15126.4(a)(1)(D) requires that "if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed." With regard to this section of the CEQA Guidelines, the potential impacts that could result from implementation of each mitigation measure proposed as part of the Project was reviewed. The following provides a discussion of the potential secondary impacts that could occur as a result of the implementation of the proposed mitigation measures, for those environmental issue areas where mitigation is provided.

a. Air Quality

Mitigation Measure AIR-1 requires that the Project utilize off-road diesel-powered construction equipment that meets or exceeds California Air Resources Board (CARB) and United States Environmental Protection Agency (USEPA) Tier 4 off-road emissions standards for excavators and loaders during Project excavation and grading activities. With implementation of the Project design features and Mitigation Measure AIR-1, maximum regional NO_X emissions would be reduced to a less than significant level. Implementation of this mitigation measure would reduce construction emissions for all pollutants and would not result in adverse secondary impacts.

b. Biological Resources[2]

Mitigation Measure BIO-1 would require vegetation removal to be scheduled outside of nesting season for raptor and songbird species (typically February 15 through August 31). In the event any construction activities occur during nesting season, a survey shall be conducted, and a buffer zone established in the event nesting birds were identified. This mitigation measure would limit construction near nesting birds and would reduce impacts to nesting birds to a less than significant level. As such, implementation of this mitigation measure would not result in adverse secondary impacts.

c. Cultural Resources—Archaeological Resources, Paleontological Resources, and Human Remains[3]

Mitigation Measure CUL-1 requires archeological monitoring during excavation and grading activities within native soils on the Project Site. Any finds would be evaluated and treated in accordance with applicable laws and regulations. Mitigation Measure CUL-2 requires construction to cease in the event evidence of subsurface paleontological resources is found during excavation and other ground disturbing activities. Any such finds would then be evaluated, and a Paleontological Resources Mitigation Program would be prepared. Mitigation Measure CUL-3 requires that if human remains are discovered during

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2 *Impacts to biological resources were determined to be less than significant with mitigation in the Project's Initial Study included as Appendix A of this Draft EIR.*

3 *Impacts to archaeological resources, paleontological resources, and human remains were determined to be less than significant with mitigation in the Initial Study included as Appendix A of this Draft EIR.*

construction or excavation, work in the affected area and the immediate vicinity shall be halted immediately and the Native American Heritage Commission and the County Coroner shall be notified pursuant to procedures and requirements set forth in California Health and Safety Code Section 7050.5. Disposition of the human remains and any associated grave goods shall also be in accordance with this regulation and Public Resources Code (PRC) Sections 5097.91 and 5097.98, as amended. These mitigation measures represent procedural actions and would be beneficial in protecting cultural resources that could potentially be encountered on-site. As such, the implementation of these mitigation measures would not result in physical changes to the environment and would not result in adverse secondary impacts.

d. Cultural Resources—Historic Resources

Mitigation Measure HIS-1 requires compliance with the Secretary of the Interior's standards with regard to work in and around the Jergins Trust Tunnel. Mitigation Measure HIS-2 requires a Construction Monitoring Plan prepared by a qualified structural engineer, historic architect, and/or other professional to ensure the protection of the Jergins Trust Tunnel during Project construction from damage due to underground excavation, pile driving, and general construction processes as well as settlement or earth movement from the removal of adjacent soil and features. These mitigation measures represent procedural actions and would be beneficial in protecting cultural resources that could potentially be encountered on-site. As such, the implementation of these mitigation measures would not result in physical changes to the environment and would not result in adverse secondary impacts.

e. Noise

Mitigation Measure NOI-1 requires stationary source equipment to be located at the greatest distance from noise-sensitive land uses and prohibits unnecessary idling of such equipment. Mitigation Measure NOI-2 requires loading and unloading of heavy construction materials to be located on-site and away from noise-sensitive uses to the extent feasible. These mitigation measures pertain to construction planning and equipment functions and would reduce cumulative construction noise impacts. Mitigation Measure NOI-3 requires a temporary and impermeable sound barrier to be erected at various places along the Project Site boundary. The noise and vibration from installation of the temporary sound barrier would be short-term and would be required to comply with the City's noise thresholds. In addition, upon completion of construction, the temporary sound barrier would be removed. Furthermore, due to the temporary nature of Project construction, these mitigation measures would not result in adverse long-term secondary impacts.

f. Transportation/Traffic

Mitigation Measure TRA-1 requires hotel staff to monitor queuing at the inbound Ocean Boulevard driveway during peak hours and peak events. When the inbound driveway is observed to be near capacity, a queuing plan shall be implemented to create a secondary valet staging area and prevent any queue spillback onto the public right-of-way. The queuing plan shall be submitted to the City of Long Beach Department of Public Works, Traffic and Transportation Bureau for review and approval. This mitigation measure would regulate valet operations and is intended to avoid unintended traffic impacts. Further, approval by the City of Long Beach Department of Public Works, Traffic and Transportation Bureau would ensure that no secondary traffic impacts result.

g. Tribal Cultural Resources[4]

Mitigation Measure TCR-1 requires the construction contractor to provide access for Native American monitoring during ground-disturbing activities. Mitigation Measure TCR-2 requires a qualified archaeologist to evaluate any Native American resources that may be unearthed during Project construction activities. These mitigation measures were included to address concerns raised during consultation with the Gabrieleño Band of Mission Indians—Kizh Nation and pertain to construction monitoring and the evaluation of any Native American resources unearthed during construction. These mitigation measures would not result in physical changes to the environment. As such, implementation of these mitigation measures would not result in adverse secondary impacts.

6. Effects Not Found to Be Significant

CEQA Guidelines Section 15128 states that an EIR shall contain a brief statement indicating reasons that various possible significant effects of a project were determined not to be significant and thus were not discussed in detail in the EIR. An Initial Study was prepared for the Project and is included in Appendix A of this Draft EIR. The Initial Study provides a detailed discussion of the potential environmental impact areas and the reasons why each environmental issue is or is not analyzed further in the EIR. The City of Long Beach determined through the Initial Study that the Project would result in less than significant impacts with respect to the following: aesthetics; air quality (odors); agricultural and forestry resources; cultural resources (archaeological resources, paleontological resources; and human remains); geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; mineral resources; population and

[4] *Impacts to tribal cultural resources were determined to be less than significant with mitigation in the Project's Initial Study included as Appendix A of this Draft EIR.*

housing; public services (fire protection, police protection, schools, libraries, and parks and recreation); transportation and traffic (air traffic patterns, hazardous design features; and emergency access); utilities and service systems (water, wastewater, stormwater drainage, and solid waste); and energy. In addition, impacts with respect to biological resources and tribal cultural resources were determined to be less than significant with mitigation incorporated. A summary of the analysis provided in Appendix A for these issue areas is provided below.

a. Aesthetics

The Project is an employment center project located within 0.5 mile of several bus lines and from the Metro Blue Line Downtown Long Beach Station. Therefore, the Project is located in a transit priority area as defined in PRC 21099. As such, in accordance with Senate Bill (SB) 743, aesthetic impacts of the Project would be considered less than significant. The analysis provided in the Initial Study, included as Appendix A of this Draft EIR, is provided for informational purposes only.

b. Agricultural and Forestry Resources

The Project Site is located in an urbanized area of the City of Long Beach and does not include any agricultural land. The Project Site is not zoned for agricultural or forest uses, and no agricultural or forest lands occur on-site or in the Project area. Therefore, the Initial Study concluded that no impacts related to agricultural and forestry resources would occur.

c. Air Quality—Odors

No objectionable odors are anticipated as a result of either construction or operation of the Project. Specifically, Project construction would involve the use of conventional building materials typical of construction projects of similar type and size. Any odors that may be generated during construction would be localized and temporary in nature and would not be sufficient to affect a substantial number of people. In addition, on-site trash receptacles would be contained, located, and maintained in a manner that promotes odor control and would not result in substantially adverse odor impacts. Therefore, the Project would not create objectionable odors affecting a substantial number of people during either construction or operation of the Project, and impacts would be less than significant.

d. Biological Resources

The Project Site is located in an urbanized area of the City of Long Beach and does not contain sensitive habitat or support any sensitive species. There are no federally protected waters or wetlands, as defined by Section 404 of the Clean Water Act, within the Project Site. The nearest waters of the United States/California and wetlands are estuarine and marine deepwater wetlands associated with Rainbow Lagoon, approximately 1,000 feet south of the Project Site. Potential impacts to nesting birds protected by the Migratory Bird Treaty Act would be fully mitigated by Mitigation Measure BIO-1, which calls for avoidance of nesting season and surveys in the event nesting season cannot be avoided.

e. Geology and Soils

The Project Site is not within a currently established Alquist–Priolo Earthquake Fault Zone as identified by the California Geological Survey (CGS) or within the City's General Plan Seismic Safety Element. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the Project Site. Therefore, the potential for surface rupture to occur on the Project Site is considered low. Impacts related to the rupture of a known earthquake fault would be less than significant.

The Project Site is located in the seismically active Southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. However, as with any new development in the State of California, building design and construction for the Project would be required to conform to the current seismic design provisions of the California Building Code. Additionally, construction of the Project would be required to adhere to the seismic safety requirements contained in the Long Beach Building Standards Code, as well as the applicable recommendations provided in the geotechnical investigations required by the City to minimize seismic-related hazards. Therefore, development of the Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Impacts associated would be less than significant.

Based on the Seismic Hazards Maps of the State of California, the Project Site is located within a potentially liquefiable area. A liquefaction analysis conducted as part of the Geotechnical Report indicates that the soils below the planned foundation levels are sufficiently dense and stiff to preclude liquefaction. In addition, the Project's design and construction would comply with California Building Code Title 24, Chapter 18 to minimize risks associated with liquefaction potential. Therefore, the Project would not expose people or structures to substantial adverse effects associated with liquefaction. Impacts would be less than significant.

The Project Site is not identified by the City within an area of steep slopes. Additionally, the Project Site and surrounding area are not designated as an earthquake-induced landslide area by the CGS. Furthermore, the Project would not require substantial alteration to the existing topography. Therefore, no significant impacts would occur.

Development of the Project would require grading, limited excavation to support the building foundations, and other construction activities that have the potential to disturb existing soils and expose soils to rainfall and wind, thereby potentially resulting in soil erosion. However, construction activities would occur in accordance with erosion control requirements imposed by the City pursuant to grading permit requirements. Based on compliance with regulatory requirements, including the implementation of BMPs, impacts would be less than significant.

The Project Site is located within a community served by existing sewage infrastructure. As such, the Project would not require the use of septic tanks or alternative wastewater disposal systems. The Project would not result in impacts related to the ability of soils to support septic tanks or alternative wastewater disposal systems.

f. Hazards and Hazardous Materials

The types and amounts of hazardous materials that would be used in connection with the Project would be typical of those used during construction of commercial developments, including vehicle fuels, paints, oils, and transmission fluids. Similarly, the types and amounts of hazardous materials used during operation of the proposed hotel and restaurant uses would be typical of such developments and would include cleaning solvents, pesticides for landscaping, painting supplies, and petroleum products. However, all potentially hazardous materials to be used during construction and operation of the Project would be contained, stored, and used in accordance with manufacturers' instructions and handled in accordance with all applicable standards and regulations, including but not limited to, those set forth by the federal and State Occupational Safety and Health Acts. Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations

Site reconnaissance was completed as part of the Phase I Environmental Site Assessment (Phase I). No hazards or hazardous materials were observed on-site and no notable issues including evidence of elevators and electrical equipment that could potentially contain fluids were observed. Local regulatory agencies and other sources were also contacted as part of the Phase I. Searches within these agencies found no recorded incidents of hazardous waste storage or disposal which might have resulted in soil and/or groundwater contamination or vapor intrusion to the Project Site.

The Phase I did not identify any areas of environmental concern with respect to the Project Site and recommended no further actions or investigations. In addition, the Project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The Project would not result in a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment. Impacts would be less than significant.

The Project Site is not located within an airport land use plan or within two miles of a public or public use airport. There are no private airstrips in the vicinity of the Project Site. Therefore, no impacts related to airport hazards would occur.

During Project construction, the majority of construction activities would be confined to the Project Site itself; however, limited off-site infrastructure improvements may require some partial lane closures adjacent to the Project Site, including on Ocean Boulevard, Pine Avenue, and Seaside Way. However, these closures would be temporary in nature and both directions of travel on area roadways would be maintained. Additionally, the Project would not place any permanent physical barriers on any of the surrounding streets, and access along and through streets and highways in the area would be maintained. Therefore, the Project would not cause an impediment along surrounding streets, which may be used as evacuation routes in the event of an emergency, or otherwise impair implementation of an emergency response plan or emergency evacuation plan. Impacts would be less than significant.

The Project Site is surrounded by urban development and is not adjacent to any wildlands. Therefore, the Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. .

g. Hydrology and Water Quality

During construction of the Project, particularly during the grading and excavation phases, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. Therefore, Project-related construction activities could potentially result in adverse effects on water quality. However, as Project construction would disturb more than one acre of soil, the Project would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit pursuant to NPDES requirements. In accordance with the permit requirements, a Stormwater Pollution Prevention Plan (SWPPP) would be developed and implemented during construction of the Project. The SWPPP would set forth BMPs, including erosion control, sediment control, non-stormwater management, and materials management measures, to minimize the discharge of pollutants in stormwater runoff. In addition, the Applicant would be required to comply with all applicable City grading permit regulations, including implementation of appropriate measures, plans, and inspections to reduce sedimentation and erosion. With compliance with applicable regulatory requirements, impacts to water quality during construction would be less than significant.

Groundwater was encountered at depths of 7.0 and 12.5 feet bgs. As the Project would include excavations to a maximum depth of approximately 22 feet below Seaside Way for building footings and foundations, temporary dewatering would likely be required within the Project Site in the event excavation for building footings encounters groundwater. Any temporary dewatering system(s) would extract, treat, and discharge groundwater to the public storm drain system, as authorized by a NPDES General Permit for dewatering issued by the Los Angeles Regional Water Quality Control Board (LARWQCB) and a storm drain connection permit issued by the City of Long Beach Department of Public Works. Therefore, if dewatering is necessary, operation of the temporary system would not be anticipated to adversely impact the flow rate or direction of groundwater. Therefore, Project construction would not change potable water levels sufficiently to reduce the ability of a water utility to use the groundwater basin for public water supplies, reduce yields in adjacent wells, deplete groundwater supplies, result in a demonstrable and sustained reduction of groundwater recharge capacity, or interfere with groundwater recharge. As such, impacts would be less than significant.

The Project Site is comprised of 75 percent impervious surfaces under existing conditions, which would increase to 93 percent under the Project. However, the Project Site is not located in an aquifer recharge area, and there are no groundwater wells or pumping activities within the Project Site. Therefore, the Project would not affect production levels of groundwater supply wells or groundwater recharge in the vicinity.

Given the depth to groundwater, the Project's foundations would be designed in a manner to support the proposed structure in saturated soil conditions, in accordance with the geotechnical engineer's recommendations set forth in the Geotechnical Report and Memo as well as the design-level geotechnical report to be prepared for the Project during the design phase. This foundation design would result in only minor impacts to the top of the groundwater table but would not affect any supply wells. Therefore, operation of the Project would result in less than significant impacts to groundwater hydrology.

Surface contaminants have the potential to adversely impact the quality of groundwater. However, the Project's proposed capture and reuse system would treat stormwater runoff to minimize, if not avoid, potential water quality impacts to groundwater.

The on-site drainage patterns would be modified through the introduction of drainage infrastructure, although these improvements would reduce the potential for erosion or siltation. Based on the design of the Project's drainage improvements and through compliance with all applicable NPDES requirements, the Project would not substantially alter the existing drainage patterns of the Project Site or surrounding area such that substantial erosion, siltation, or on-site or off-site flooding would occur. Therefore, impacts would be less than significant.

The Project Site is not located within a 100-year floodplain. According to the City of Long Beach Flood Zones Map, the Project Site is located within a 0.2 percent annual chance flood hazard zone. Thus, the Project would not place structures that would impede or redirect flood flows within a 100-year floodplain. No impacts with regard to flood hazard areas would occur.

The Project Site is located in the low-lying shoreline area of Downtown Long Beach, approximately 0.3 mile north of Queensway Bay and approximately 1,000 feet north of Rainbow Lagoon. As such, the Project Site is located within an area potentially affected by a tsunami or seiche as mapped in the City's General Plan Seismic Safety Element.[5] However, tsunami warning systems are in place, such as the seismic Sea-Wave Warning System for the Pacific Ocean operated by a cooperative program of nations around the Pacific Rim, and the Alaska Tsunami Warning Center operated by the National Weather Service, and evacuation plans are in place to minimize hazards from tsunamis. In addition, the presence of the harbor breakwater and intervening urban development would limit potential effects from a seiche or tsunami on the Project Site. Therefore, impacts related to a potential seiche or tsunami would be less than significant.

h. Land Use and Planning

As evaluated in the Initial Study, the proposed uses would be consistent with other uses in the surrounding area and would be compatible in terms of building heights and massing with surrounding development. In addition, the Project would provide greater connectivity in the community by completing the walkway connecting the corner of Pine Avenue and Ocean Boulevard to the existing Convention Center Walkway east of the Project Site. Furthermore, all proposed development would occur within the boundaries of the Project Site as it currently exists and would not physically alter surrounding parcels or properties. Therefore, the Project would not physically divide, disrupt, or isolate an established community. Rather, implementation of the Project would result in further infill

[5] *City of Long Beach General Plan, Seismic Safety Element, Plate 11, October 1988.*

of an already developed community with similar and compatible land uses. No significant impacts would occur.

As previously discussed, the Project Site does not provide habitat for sensitive biological resources. As such, the Project Site is not subject to a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, the Project would not result in impacts associated with or conflict with the provisions of any habitat conservation plans.

i. Mineral Resources

Although the Project Site is mapped within the Wilmington Oil Field, there are no indications of any production or exploratory wells being drilled on or in the immediate vicinity of the site. The nearest production wells are located 0.25 west-southwest of the Project Site, and the major oil producing platform Island Grissom is located 0.75 mile to the southeast. Based on the lack of historic and/or active mineral extraction activities, the Project would not result in the loss of availability of a mineral resource or a mineral resource recovery site. No significant impacts would occur.

j. Population and Housing

The Project does not involve the development of residential uses and would not directly contribute to population growth within the Project Site area. While Project construction would create temporary construction-related jobs, the work requirements of most construction projects are highly specialized so that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process. Thus, Project-related construction workers would not be anticipated to relocate their household's place of residence as a consequence of working on the Project and, therefore, new permanent residents generally would not be generated during Project construction. With respect to Project operation, the proposed hotel and restaurant uses would include a range of full-time and part-time positions that would typically be filled by persons already residing in the vicinity of the workplace and who generally do not relocate their households for such employment opportunities. As such, the Project would be unlikely to create new households in the area or generate an indirect demand for additional housing. As such, the Project would not result in a notable increase in demand for new housing, and any new demand, should it occur, would be minor in the context of forecasted growth for the City. Furthermore, as the Project is located in a highly developed area with an established network of roads and other urban infrastructure, it would not require the extension of such infrastructure in a manner that would indirectly induce substantial population growth. Therefore, the Initial Study concluded that impacts related to population and housing would be less than significant.

k. Public Services

(1) Fire

While the Project would introduce a new service population to the Project Site, the Project does not include uses that pose a significant fire hazard. Project design would be subject to the requirements set forth in the California Fire Code, California Building Code, and the Long Beach Municipal Code (LBMC), as well as Long Beach Fire Department (LBFD) requirements for fire access. The Project plans would be subject to LBFD site/building plan review, which would ensure adequate emergency access, fire hydrant availability, and compliance with all applicable codes. Nevertheless, the increase in development on the Project Site could increase the demand for fire protection services in the area. Compliance with LBMC Chapter 18.23, which requires payment of the fire facilities impact fee, would ensure that Project implementation would result in a less than significant impact on fire protection services. Therefore, with compliance with existing fire safety requirements, including payment of the fire facilities impact fee, impacts with respect to fire protection services would be less than significant.

(2) Police

The Project does not include residential units, thus the residential population in the South Patrol Division service area would not increase. The proposed hotel and restaurant uses would generate a range of full- and part-time positions typical of commercial uses. These types of positions are generally filled by persons already residing in the vicinity of the workplace who generally do not relocate their households due to such employment opportunities. As such, the Project is not anticipated to indirectly result in residential population growth in the area which would change the existing Citywide officer-to-resident ratio. Nevertheless, the Project would increase the employee and visitor population in the area and, accordingly, the demand for police protection services provided by the Long Beach Police Department (LBPD) could increase.

In accordance with LBMC Chapter 18.22, the Project Applicant would pay the appropriate police facilities impact fee. The Project also would generate revenues to the City's general fund (in the form of property taxes, sales revenue, etc.) that could be applied toward the provision of new police facilities and related staffing, as deemed appropriate or necessary. Therefore, the Initial Study concluded that impacts to police protection services during operation of the Project would be less than significant.

(3) Schools

The development of a hotel and restaurant uses would not result in a direct generation of school-aged children and an associated demand for school services within the Long Beach Unified School District (LBUSD) service area. The number of new students that could be indirectly generated by the Project would be minimal as the Project is not anticipated to induce a substantial number of persons to change their place of residence as a result of gaining employment at the Project Site. Furthermore, pursuant to SB 50, the Applicant would be required to pay development fees for schools to the LBUSD prior to the issuance of building permits, which is considered mitigation of any Project-related school impacts. Therefore, the Initial Study concluded that impacts related to schools would be less than significant.

(4) Parks and Recreation

Hotel and restaurant uses do not typically create a great demand for parks and recreational facilities, and in any case, the proposed hotel would include recreational amenities such as a pool and fitness center for hotel guests. The Project would not result in on-site residents who would utilize nearby parks and recreational facilities. Furthermore, any use of nearby parks and recreational facilities by Project employees is anticipated to be nominal. Thus, the demand for public parks and recreational facilities associated with Project development would be limited. As such, the Initial Study concluded that impacts related to parks and recreation would be less than significant.

(5) Libraries

Project implementation would not result in a direct increase in the number of residents within the service population of the Main Library, located approximately 500 feet northwest of the Project Site. Furthermore, Project employees and any potential indirect population generation that could be attributable to those employees would generate minimal demand for library services. Therefore, the Initial Study concluded that impacts related to library services would be less than significant.

I. Transportation/Traffic—Air Traffic, Hazardous Design Features, and Emergency Access

As indicated above, the Project Site is not located within the vicinity of a public or private airport or planning boundary of any airport land use plan. In addition, the proposed approximately 375.5-foot tall building would be similar to nearby buildings in downtown and would not increase or change air traffic patterns or increase levels of risk with respect to air traffic. Therefore, impacts would be less than significant.

The roadways adjacent to the Project Site are part of the urban roadway network and contain no sharp curves or dangerous intersections. The Project does not include any major modifications to the street system or any dangerous design features. In addition, the

Project would not result in incompatible uses, as the proposed uses are consistent with other commercial uses in the Project vicinity. Thus, no impacts related to increased hazards due to a design feature or incompatible use would occur.

While it is expected that the majority of Project construction activities would be confined on-site, the Project may require some construction activities to occur in adjacent street rights-of-way. As such, some lane closures adjacent to the Project Site, including on Ocean Boulevard, Pine Avenue, and Seaside Way, may occur. However, these closures would be temporary in nature and both directions of travel on area roadways would be maintained so as not to physically impair access to and around the Project Site. The Project would also implement a Construction Traffic Management Plan to facilitate traffic and pedestrian movement and minimize potential conflicts between construction activities, street traffic, bicyclists, and pedestrians. Additionally, the Project would not place any permanent physical barriers on any of the existing surrounding streets, and access in the area would be maintained. Therefore, the Project would not result in inadequate emergency access, and such impacts would be less than significant.

m. Tribal Cultural Resources

AB 52 consultation letters were sent on June 20, 2018 to local tribal councils based on a list provided by the Native American Heritage Commission. No response was received from any of the tribes contacted during or following the mandated 30-day response period, which concluded on July 20, 2018. However, on October 12, 2018, the City received a request for consultation from the Gabrieleño Band of Mission Indians—Kizh Nation. On November 1, 2018, the City had a conference call with tribal Chairman Andrew Salas. Chairman Salas agreed that a mitigation measure requiring tribal monitoring during all earth disturbance activities would satisfy his concerns and no further consultation would be needed. Therefore, Mitigation Measures TCR-1 and TCR-2 were included in the Initial Study as part of the Project. With implementation of these mitigation measures, impacts would be less than significant.

n. Utilities and Service Systems

(1) Wastewater

Wastewater generated during operation of the Project would be collected and discharged into existing sewer mains and conveyed to the Joint Water Pollution Control Plant (JWPCP) in the City of Carson. The Project would generate an estimated average flow of 77,137 gallons per day (gpd) of wastewater and a peak flow of 154,710 gpd of wastewater, which would represent 0.05 and 0.11 percent of the available capacity at the JWPCP, respectively. Furthermore, as the JWPCP is in compliance with the State's wastewater treatment requirements, the Project would not exceed the wastewater treatment requirements of the LARWQCB.

Existing wastewater infrastructure surrounding the Project Site includes 10-inch sewer mains within Ocean Boulevard and Seaside Way and an 8-inch sewer lateral that is cut and capped near the southeastern edge of the Project Site. The 8-inch line would be replaced with a 10-inch line as part of the Project, and the replacement line would follow the same alignment and utilize the same connection points as the existing line. With implementation of the Construction Traffic Management Plan and coordination with the LBWD, impacts would be less than significant.

(2) Water

Development of the Project would result in an increase in long-term water demand related to water consumption, building operations, maintenance, and other activities on the Project Site. As detailed in the Initial Study, the Project is anticipated to result in an average water demand of approximately 77,137 gpd or 86.41 acre-feet per year (AFY). It should be noted that the Project's estimated water demand is conservative as it does not account for water conservation features that would be included as part of the Project (i.e., a 20-percent reduction in water usage as required by CalGreen), or the potential use of treated stormwater for irrigation. The Project's estimated in water demand of 86.41 AFY would comprise approximately 0.11 percent of the City's water demand in 2022.

Near the Project Site, existing water mains include a 12-inch pipe within Ocean Boulevard, a 12-inch pipe within Pine Avenue, and a 12-inch pipe within Seaside Way. Existing laterals within the Project Site range from 2- to 6-inch pipes. New connection points would be required for the Project, but no upgrades to the mainlines serving the Project Site would be required.

Based on the above, Project impacts associated with water supply and infrastructure would be less than significant.

(3) Solid Waste

Construction of the Project would generate construction and demolition wastes that would be recycled or collected by private waste haulers contracted by the Applicant and taken for disposal at the County's inert landfills. The Initial Study concluded that the Project would generate a total of approximately 2,873 tons of demolition debris and approximately 1,044 tons of construction debris, for a combined total of approximately 3,918 tons of construction-related waste generation. This would represent approximately 0.007 percent of the existing remaining disposal capacity of 56.3 million tons for the unclassified landfill accepting waste from the City. Therefore, the Initial Study concluded that construction-related impacts related to solid waste would be less than significant.

The Initial Study concluded that the Project would generate approximately 2,500 pounds per day of solid waste upon completion. The estimated solid waste generated by the Project would represent approximately 0.1 percent of the daily solid waste disposed of by the City. Furthermore, the solid waste generated by the Project would represent approximately 0.003 percent of the remaining daily disposal capacity of the County's Class III landfills open to the City. Therefore, the Initial Study concluded that impacts related to solid waste would be less than significant.

o. Energy Conservation and Infrastructure

As detailed in the Initial Study, Project construction activities would require a total of 68,013 kilowatt-hours (kWh) of electricity and 142,962 gallons of transportation fuel (gasoline and diesel). During Project operations, a total of 4,690 MWh of electricity, 15,818,630 cubic feet (cf) of natural gas, and 232,208 gallons of transportation fuel (gasoline and diesel) would be consumed on an annual basis.

Construction equipment would comply with energy efficiency requirements contained in the Federal Energy Independence and Security Act or previous Energy Policy Acts for electrical motors and equipment. Electricity and natural gas usage during Project operations would comply with Title 24 standards and applicable CalGreen requirements. Accordingly, Project construction and operational activities would comply with existing energy standards with regards to electricity and natural gas usage.

With regard to transportation fuels, the Project would comply with CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy. During Project operations, vehicles traveling to and from the Project Site are assumed to comply with corporate average fuel economy (CAFE) fuel economy standards, as required.

Based on the above, Project construction and operational activities would comply with existing energy standards with regards to electricity and natural gas usage, as well as transportation fuel consumption.

As energy consumption during Project construction would be comparatively negligible, and the Project's operational energy requirements would fall within SCE's and LBER's service capabilities, the Project would not result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities in a manner that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Project impacts related to energy usage would be less than significant.

VII. References

VII. References

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VIII. Acronyms and Abbreviations

VIII. Acronyms and Abbreviations

μg	microgram
μg/m^3	micrograms per cubic meter
μm	micrometer
1,1,1-trichloroethane	methyl chloroform
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
2016–2040 RTP/SCS	2016–2040 Regional Transportation Plan/Sustainable Communities Strategy
AAM	annual arithmetic mean
AB	Assembly Bill
AFY	acre-feet per year
Air Basin	South Coast Air Basin
AQMP	air quality management plan
ATCM	airborne toxic control measure
AVR	average vehicle ridership
BACT	best available control technology
C_2F_6	Hexafluoroethane
$C_2H_4F_2$	1,1-Difluoroethane
CAA	Clean Air Act
CAAP	Climate Action and Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalARP	California Accidental Release Program
CalEEMod	California Emissions Estimator Model

CalEPA	California Environmental Protection Agency
CalGreen Code	California Green Building Standards
California Register	California Register of Historical Resources
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CARB Handbook	*Air Quality and Land Use Handbook*
CAS	climate adaptation strategy
CAT	climate action team
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	commercial end-use survey
cf	cubic feet
CF_4	Tetrafluoromethane
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_2FCF_3	1,1,1,2-Tetrafluoroethane
CH_4	methane
CIRIS	City Inventory Reporting and Information System
City	City of Long Beach
Climate Registry	California Climate Action Registry
CMP	congestion management program
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2/MWh	CO_2 per megawatt-hour

CO_2e	equivalent mass of carbon dioxide
CPUC	California Public Utilities Commission
dB	decibel
dBA	A-weighted decibel filtering system
Downtown Shoreline Plan	Downtown Shoreline Planned Development District
DPM	diesel particulate matter
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
FAR	floor area ratio
FED to the Climate Change Scoping Plan	Climate Change Scoping Plan Functional Equivalent Document
FTA	Federal Transit Administration
General Plan	City of Long Beach General Plan
GHG	greenhouse gas
Governor Brown	Governor Edmund G. "Jerry" Brown
gpd	gallons per day
Guidelines Amendments	Draft Guidelines Amendments for Greenhouse Gas Emissions
GWPs	global warming potentials
H_2S	hydrogen sulfide
HAPs	hazardous air pollutants
HFCs	hydrofluorocarbons
Historic Resources Memo	*Project Impact Analysis for 100 E. Ocean Blvd., Long Beach Related to Historic Resources*
HQTA	high-quality transit area
HRA	health risk assessment
Hz	hertz
I-710	Interstate 710

ICU	intersection capacity utilization
Interpretive Plan	Interpretive Plan for the Jergins Trust Tunnel
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
JWPCP	Joint Water Pollution Control Plant
kWh	kilowatt-hours
LARWQCB	Los Angeles Regional Water Quality Control Board
LBER	Long Beach Energy Resources
LBFD	Long Beach Fire Department
LBMC	Long Beach Municipal Code
LBPD	Long Beach Police Department
LBUSD	Long Beach Unified School District
LBWD	Long Beach Water Department
LCFS	low carbon fuel standard
L_{dn}	Day/Night Average Sound Level
LED	light-emitting diode
LEED®	Leadership in Energy and Environmental Design
L_{eq}	Equivalent Sound Level
LEV	low-emission vehicle
L_{max}	maximum noise levels
L_n	statistical sound level
Long Beach Freeway	Interstate 710
Long Beach Planning Bureau	City of Long Beach Development Services Planning Bureau
LOS	level of service
LST	localized significance threshold
LUD	land use district

Mandatory Reporting Rule	California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions
Metro	Los Angeles County Metropolitan Transportation Authority
MMBtu	million British thermal units
Mobility Element	Mobility Element of the City of Long Beach General Plan
mpg	miles per gallon
mph	miles per hour
MPO	metropolitan planning organization
MRR	California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions
$MTCO_2e$	metric tons of CO_2e
MUTCD	*California Manual on Uniform Traffic Control Device*
MW	megawatts
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standard
National Register	National Register of Historic Places
NF_3	nitrogen trifluoride
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation
OPR	Office of Planning and Research

Parking Memo	*Shared Parking Study for 100 E. Ocean Boulevard Memorandum*
Pb	lead
PCH	Pacific Coast Highway
PD-6	Planned Development District 6
PFCs	perfluorocarbons
Phase I	Phase I Environmental Site Assessment
PHEV	plug-in hybrid electric vehicles
$PM_{2.5}$	fine particulate matter ≤ 2.5 microns
PM_{10}	particulate matter ≤ 10 microns
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
Project	100 E. Ocean Project
Project Site	100 E. Ocean Boulevard
RASS	residential appliance saturation survey
Redevelopment Agency	Long Beach Redevelopment Agency
RFP	Request for Proposals
RFS	renewable fuel standard
RMS	root-mean square
ROG	reactive organic compound
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison

SCS	Sustainable Community Strategy
SF_6	sulfur hexafluoride
SIP	state implementation plans
SO_2	sulfur dioxide
SRA	source receptor area
Supplemental FED	Supplemental FED to the Climate Change Scoping Plan
Supreme Court	United States Supreme Court
Sustainable City Action Plan	Long Beach Sustainable City Action Plan
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminant
TCA	methyl chloroform
TDM	transportation demand management
TDM Plan	*100 E. Ocean Boulevard Transportation Demand Management Plan*
TeNS	Technical Noise Supplement
TIA	traffic impact analysis
TOD	transit-oriented development
Traffic Study	*100 E. Ocean Boulevard Transportation Impact Study*
ULI	Urban Land Institute
USDOE	United States Department of Energy
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
V/C	volume-to-capacity
VdB	velocity level in decibel
VMT	vehicle miles traveled
VOCs	volatile organic compounds
ZEV	zero-emission vehicle

IX. List of Preparers

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