PUBLIC REVIEW DRAFT | DECEMBER 2017

2300 Redondo Avenue Project

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

Submitted to: **City of Long Beach**

Submitted by: **Michael Baker International**

PUBLIC REVIEW DRAFT

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

2300 Redondo Avenue Project

LEAD AGENCY:

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December 2017

JN 161401

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INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION AND TECHNICAL APPENDICES ON CD

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1.0 INTRODUCTION

The proposed 2300 Redondo Avenue Project (herein referenced as the "project") involves construction of three buildings encompassing 427,565 square feet of light industrial/manufacturing uses with supporting office facilities and 638 parking spaces on a 19.09-acre site within the City of Long Beach (City). Following a preliminary review of the proposed project, the City has determined that it is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study/Mitigated Negative Declaration addresses the direct, indirect, and cumulative environmental effects of the project, as proposed.

1.1 STATUTORY AUTHORITY AND REQUIREMENTS

In accordance with CEQA (Public Resources Code Sections 21000-21177) and pursuant to Section 15063 of Title 14 of the California Code of Regulations (CCR), the City of Long Beach, acting in the capacity of Lead Agency, is required to undertake the preparation of an Initial Study to determine whether the proposed project would have a significant environmental impact. If the Lead Agency finds that there is no evidence that the project, either as proposed or as modified to include the mitigation measures identified in the Initial Study, may cause a significant effect on the environment, the Lead Agency shall find that the proposed project would not have a significant effect on the environment and shall prepare a Negative Declaration (or Mitigated Negative Declaration) for that project. Such determination can be made only if "there is no substantial evidence in light of the whole record before the Lead Agency" that such impacts may occur (Section 21080, Public Resources Code).

The environmental documentation, which is ultimately approved, adopted, and/or certified by the City of Long Beach in accordance with CEQA, is intended as an informational document undertaken to provide an environmental basis for subsequent discretionary actions upon the project. The resulting documentation is not, however, a policy document and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and other discretionary approvals would be required.

1.2 PURPOSE

Section 15063(d) of the CEQA Guidelines identifies specific disclosure requirements for inclusion in an Initial Study. Pursuant to those requirements, an Initial Study shall include:

- A description of the project, including the location of the project;
- Identification of the environmental setting;
- Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries;
- Discussion of ways to mitigate significant effects identified, if any;
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls; and
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study.

1.3 CONSULTATION

As soon as the Lead Agency (in this case, the City of Long Beach) has determined that an Initial Study would be required for the project, the Lead Agency is directed to consult informally with all Responsible Agencies and Trustee Agencies that are responsible for resources affected by the project, in order to obtain the recommendations of those agencies on the environmental document to be prepared for the project. Following receipt of any written comments from those agencies, the City of Long Beach will consider their recommendations when formulating the preliminary findings. Following completion of this Initial Study, the City of Long Beach will initiate formal consultation with these and other governmental agencies as required under CEQA and its implementing guidelines.

1.4 INCORPORATION BY REFERENCE

The following documents were utilized during preparation of this Initial Study, and are incorporated into this document by reference. The documents are available for review at the City of Long Beach Development Services Department, located at 333 West Ocean Boulevard, Long Beach, California 90802.

- *City of Long Beach General Plan* (Updated October 2013). The purpose of a General Plan is to provide a general, comprehensive, and long-range guide for community decision-making. The *City of Long Beach General Plan* (*General Plan*) consists of the following elements, adopted on various dates: Historic Preservation; Open Space; Housing; Air Quality; Mobility; Land Use; Seismic Safety; Local Coastal Program; Noise; Public Safety; Conservation; and Scenic Routes. The individual elements identify goals and policies for existing and future conditions within the City of Long Beach.

- *City of Long Beach Municipal Code (Codified through Ordinance No. ORD-17-001, enacted February 14, 2017, Supplement No. 16)*. The *City of Long Beach Municipal Code* (*LBMC*) consists of regulatory, penal, and administrative ordinances of the City of Long Beach. It is the method the City uses to implement control of land uses, in accordance with the *General Plan* goals and policies. Volume II (Title 20, Subdivisions) and Volume III (Title 21, Zoning) of the LBMC identifies land uses permitted and prohibited according to the zoning designation of particular parcels. The purpose of the *Zoning Regulations* within the LBMC is to promote and preserve the public health, safety, comfort, convenience, prosperity, and general welfare of the people of Long Beach.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

Regionally, the project site is centrally located within the City of Long Beach (City), County of Los Angeles (County); refer to Exhibit 2-1, *Regional Map*. Locally, the project site is situated at an existing United States Postal Service (USPS) facility (2300 Redondo Avenue), approximately 0.35 mile south of Interstate 405 (I-405) and 0.35 mile west of State Route 19 (SR-19); refer to Exhibit 2-2, *Site Vicinity*. The 19.09-acre project site is generally flat and includes Assessor's Parcel Number's (APNs) 7218-002-916 and -028-901.[1]

2.2 ENVIRONMENTAL SETTING

The existing USPS facility was constructed in the late 1970's and expanded in the early 2000's to include an approximately 337,409 square-foot mail processing/vehicle maintenance facility and retail office (known as GMF Long Beach). The primary components of the facility include a 323,933 square-foot mail processing building and 11,456 square-foot vehicle maintenance facility. A number of other small, ancillary structures also occur on-site.

The USPS intends to close and vacate the facility in April 2018, after a new off-site retail facility is completed and operational. As such, the majority of mail processing activities at the facility have ceased. However, remaining operations include a retail postal counter, bulk mail and passport processing activities, a limited number of mail carriers, and a vehicle maintenance facility.

Most of the site is paved, for the purposes of drive aisles, loading areas, and surface parking. Limited ornamental landscaping, including trees, shrubs, and groundcover is located along the site boundary and the eastern side of the mail processing facility. Access to the site is currently provided via four driveways along Redondo Avenue (three full access driveways and one exit-only driveway), and three full access driveways along East Burnett Street. The project site also includes a one-way drive-thru mailbox along Redondo Avenue.

SURROUNDING USES

Surrounding land uses in proximity to the project site are primarily comprised of industrial, office, institutional, governmental, medical, residential, and transit-related uses. The surrounding land uses are as follows:

- *North:* The site is bound by Burnett Street to the north. North of Burnett Street is a large Office Depot warehouse building, governmental buildings (Department of Motor Vehicles Long Beach [DMV]), institutional building (North-West College [NWC]), and medical facility (AbilityFirst Long Beach Center).

- *East:* The PostCity Financial Credit Union and Training Center are located to the east of the project site (which share APN 7218-002-916 with the project site). Other uses to the east include residential, office, and institutional land uses.

- *South:* The California National Guard is located south of the project site.

- *West:* The site is bound by Redondo Avenue to the west. West of Redondo Avenue are commercial uses including The Wine Country and Rossmoor Pastries, and Tesoro Logistics Hathaway Terminal, a petroleum distribution facility.

[1] First American Real Estate Solutions, *RealQuest Property Data*, accessed on April 18, 2017.

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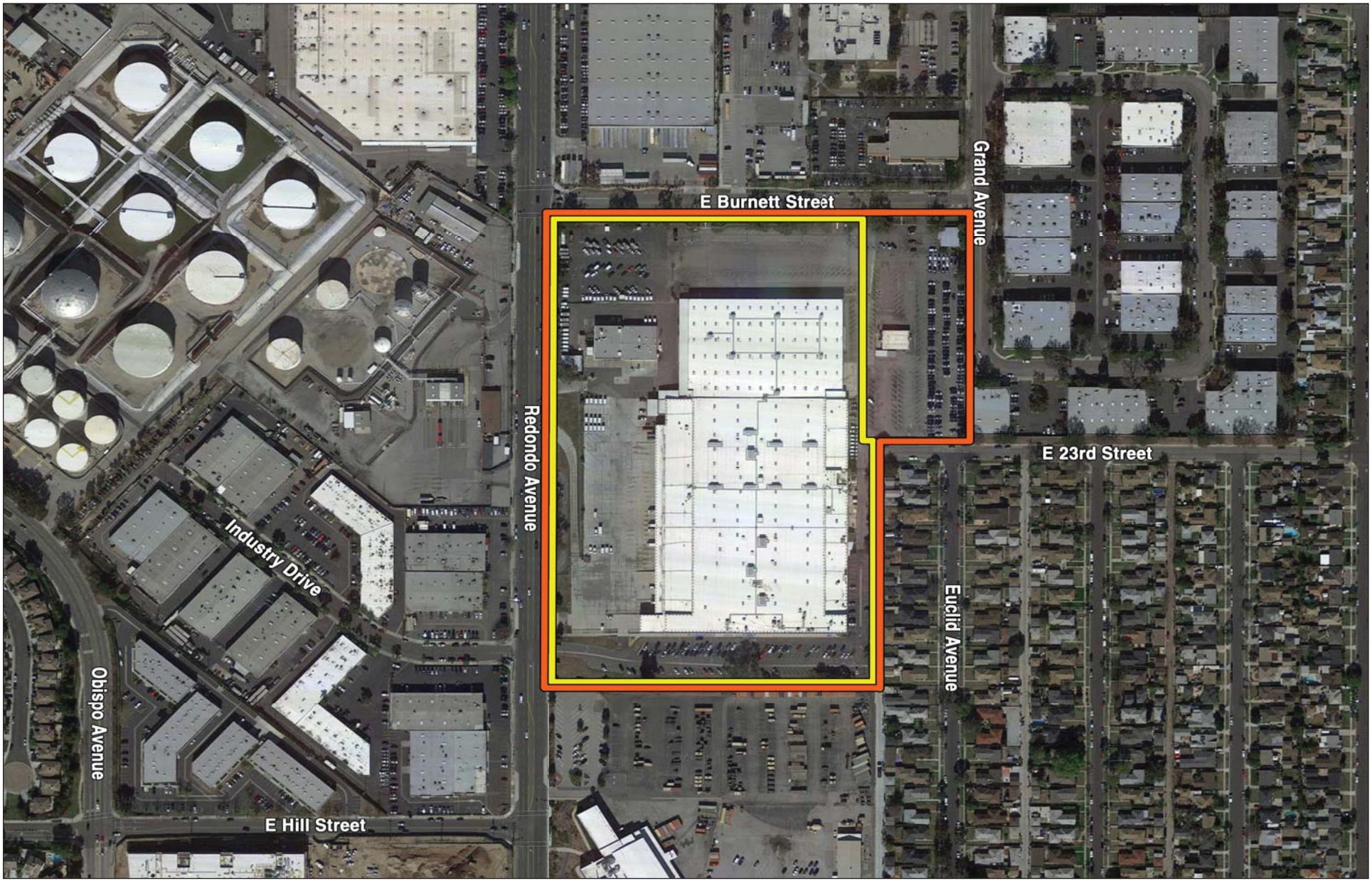
Regional Map

Exhibit 2-1



Source: Google Earth 2017.
- Project Site
- Existing USPS Facility Boundary

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2300 REDONDO AVENUE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Site Vicinity

Exhibit 2-2

2.3 EXISTING GENERAL PLAN AND ZONING

The General Plan Land Use Map (revised October 2012) designates the project site as "LUD 7; Mixed Uses." A combination of land uses intended for the Mixed Use District include, but are not limited to, employment centers such as retail, offices, and medical facilities; high density residences; visitor-serving facilities; personal and professional services; or recreational facilities. The *City of Long Beach Zoning Map* zones the project site as "Institutional (I)." Based on the *City of Long Beach Municipal Code* (*LBMC*), this zoning emphasizes educational, religious or public service activities of a nonprofit nature and/or by facilities for public assemblage.

The General Plan Land Use Map designates the surrounding areas to the north and south as "LUD 7; Mixed Uses." To the east, surrounding areas are designated "LUD 2; Mixed Style Homes." The project site is bound by the City of Signal Hill to the west. According to the *City of Signal Hill General Plan* Land Use Element, surrounding areas west of the project site are designated "3.4; Commercial Industrial" and "4.2; General Industrial."

The *City of Long Beach Zoning Map* zones the surrounding areas to the north as "Planned Development District 15 (PD-15); Redondo Avenue" and "Planned Development District 7 (PD-7), Long Beach Business Center." To the east, surrounding areas are zoned "Two-Family Residential, Intensified Development (R-2-N)." To the south, surrounding areas are zoned "Planned Development District 17 (PD-17), Alamitos Land." The *City of Signal Hill Zoning Map* zones the surrounding areas to the west as "Commercial Industrial (CI)" and "General Industrial (GI)."

2.4 PROJECT CHARACTERISTICS

The proposed project would include demolition of the existing mail processing and vehicle maintenance facilities and construction of three new light industrial/manufacturing buildings. The new development would encompass 427,565 gross square feet of light industrial/manufacturing uses with supporting office facilities and 638 surface parking spaces on the 19.09-acre site; refer to Exhibit 2-3, *Conceptual Site Plan*. Project implementation would include a zone change and zoning code amendment along with approval of a tentative parcel map and Site Plan Review (the design review entitlement).

2.4.1 ZONE CHANGE AND ZONING CODE AMENDMENT

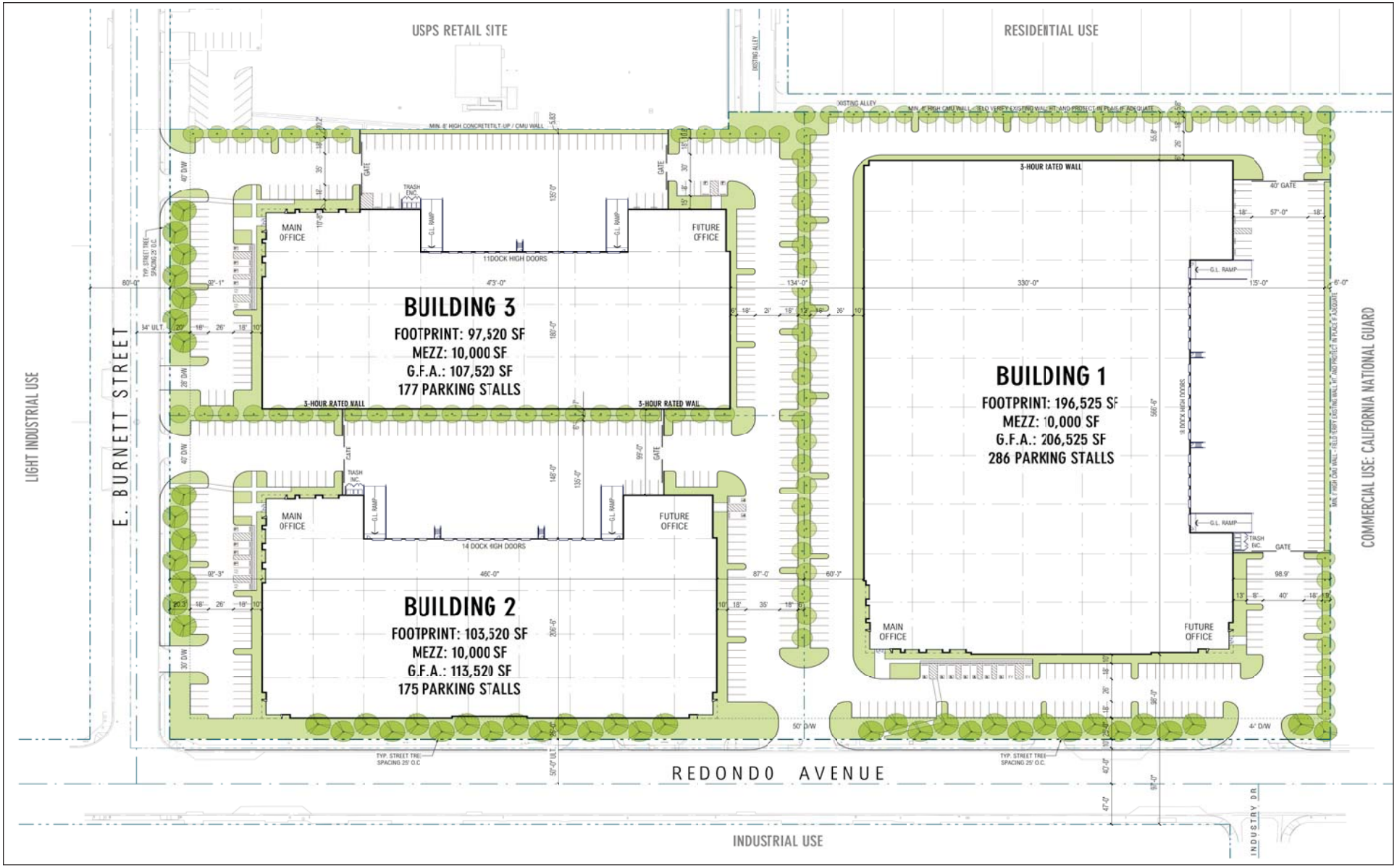
Project implementation would include a zone change and zoning code amendment from "Institutional (I)" to a new subarea of "Planned Development District 7 (PD-7), Long Beach Business Center" oriented toward light industrial uses. According to the LBMC, the PD designation allows for flexible development plans to be prepared for areas of the City which may benefit from the formal recognition of unique or special land uses and the definition of special design policies and standards not otherwise possible under conventional zoning district regulations.

2.4.2 TENTATIVE PARCEL MAP

The proposed project includes approval of a tentative parcel map. The USPS concluded an ad-hoc subdivision to separate a 3.07-acre parcel to the east of the development site for construction of a new USPS retail location (not included in this project or analysis). The remaining 20.00-acre development site was conveyed to the developer. This 20-acre property will be subdivided into three parcels, each to contain one of the proposed light industrial/manufacturing buildings (see site plan).

2.4.3 PROPOSED LIGHT INDUSTRIAL/MANUFACTURING BUILDINGS

The proposed project would demolish 337,409 square feet of the existing USPS facility and construct 427,565 gross square feet of new light industrial/manufacturing uses with supporting office facilities. As shown in Table 2-1, *Proposed On-Site Development*, the new development would include a net increase of 90,139 square feet of building area.



Source: RGA, Office of Architectural Design, dated August 9, 2017.

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2300 REDONDO AVENUE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Conceptual Site Plan

Exhibit 2-3

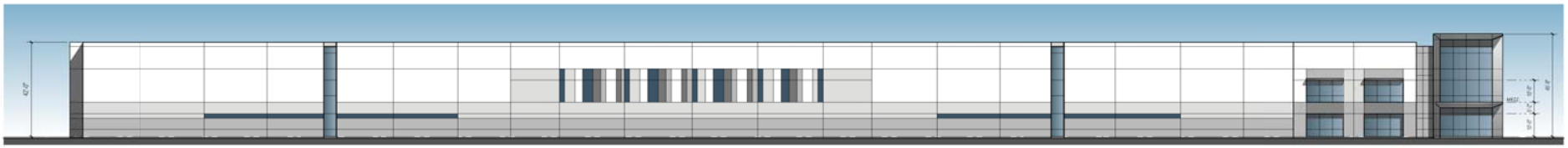
Table 2-1
Proposed On-Site Development

Development	Square footage
Existing USPS Facility to be Demolished	
Total	*337,409*
Proposed Light Industrial Facility	
Building 1 Office	30,979
Building 1 Manufacturing	41,305
Building 1 Warehouse	134,241
Total for Building 1	*206,525*
Building 2 Office	17,028
Building 2 Manufacturing	39,732
Building 2 Warehouse	56,760
Total for Building 2	*113,520*
Building 3 Office	16,128
Building 3 Manufacturing	48384
Building 3 Warehouse	43,008
Total for Building 3	*107,520*
Total	**427,565**
Total to be Demolished	*337,409*
Net Increase	***90,156***

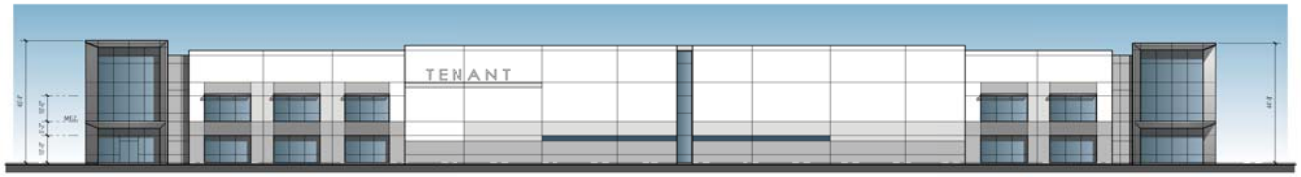
Building 1, approximately 206,525 square feet with a range in height from 41 feet to 45 feet (refer to Exhibit 2-4a, *Building 1 Conceptual Elevations*), would be oriented from east to west with two areas (in the southeast and southwest corners) devoted to office use to support the principal use. Depending upon the number of tenants, office area may ultimately be distributed between the two areas noted above (or concentrated in one area, either in the southeast or southwest corner) and may or may not be distributed across the 10,000 square-foot second-level mezzanines. Building 1 would include approximately 30,979 square feet of office use, 41,305 square feet of manufacturing, and 134,241 of warehouse use. Truck bays (18 dock doors) would be located along the south side of the building. Two 40-foot gates, located east and west of the truck bay area, would limit access to the docking area.

Building 2, approximately 113,520 square feet with a range in height from 39 feet to 42 feet and 8 inches (refer to Exhibit 2-4b, *Building 2 Conceptual Elevations*), would be oriented from north to south with two areas (in the northeast and southeast corners) devoted to office use to support the principal use. Depending upon the number of tenants, office area may ultimately be distributed between the two areas noted above (or concentrated in one area, either in the northeast or southeast corner) and may or may not be distributed across the 10,000 square-foot second-level mezzanines. Building 2 would include approximately 17,028 square feet of office use, 39,732 square feet of manufacturing, and 56,760 of warehouse use. Truck bays (14 dock doors) would be located along the east side of the building. Two gates, located north and south of the truck bay area, would limit access to the docking area.

Building 3, approximately 107,520 square feet with a range in height from 39 feet to 42 feet and 8 inches (refer to Exhibit 2-4c, *Building 3 Conceptual Elevations*), would be oriented from north to south with two areas (in the northeast and southeast corners) devoted to office use to support the principal use. Depending upon the number of tenants, office area may ultimately be distributed between the two areas noted above (or concentrated in one area, either in the northeast or southeast corner) and may or may not be distributed across the 10,000 square-foot second-level mezzanines. Building 3 would include approximately 16,128 square feet of office use, 48,384 square feet of manufacturing, and 43,008 of warehouse use. Truck bays (11 dock doors) would be located along the east side of the building. Two gates, located north and south of the truck bay area, would limit access to the docking area.

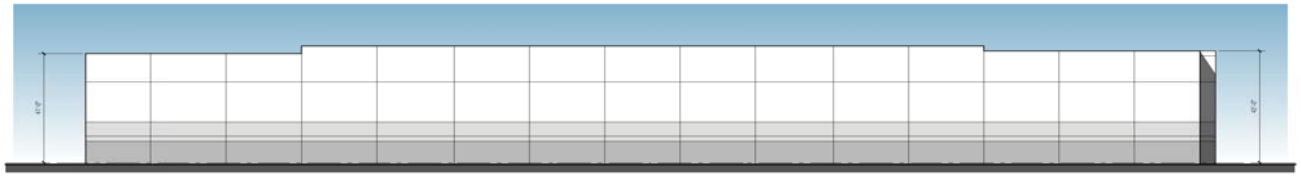


NORTH ELEVATION



WEST ELEVATION - REDONDO AVE.

SOUTH ELEVATION



EAST ELEVATION

Source: RGA, Office of Architectural Design, dated April 18, 2017.

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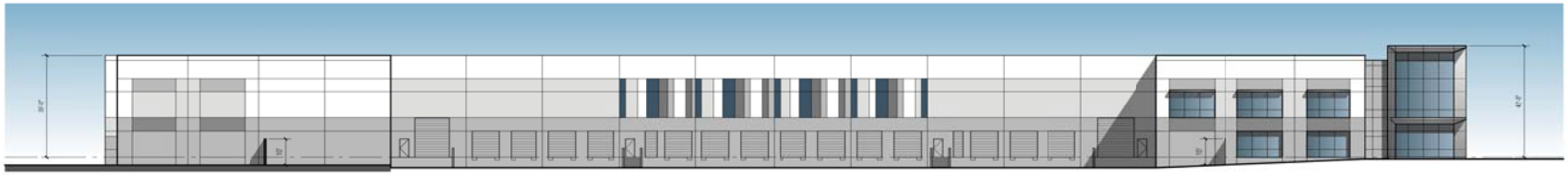
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

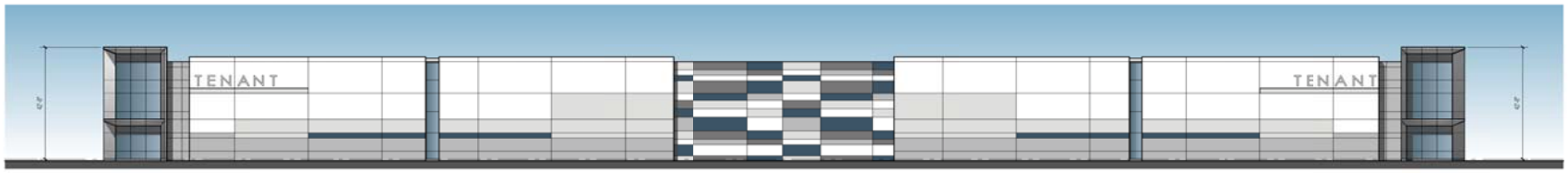
Building 1 Conceptual Elevations

Exhibit 2-4a

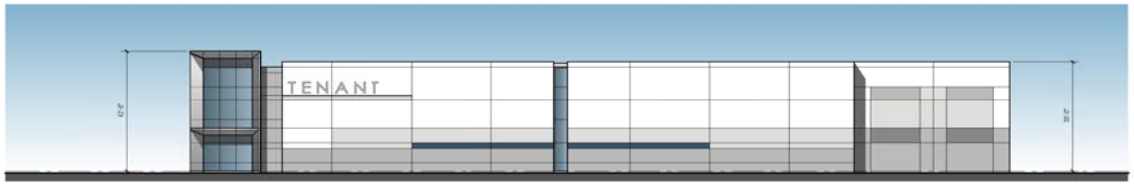


EAST ELEVATION

NORTH ELEVATION - BURNETT ST.



WEST ELEVATION - REDONDO AVE.



SOUTH ELEVATION

Source: RGA, Office of Architectural Design, dated April 18, 2017.

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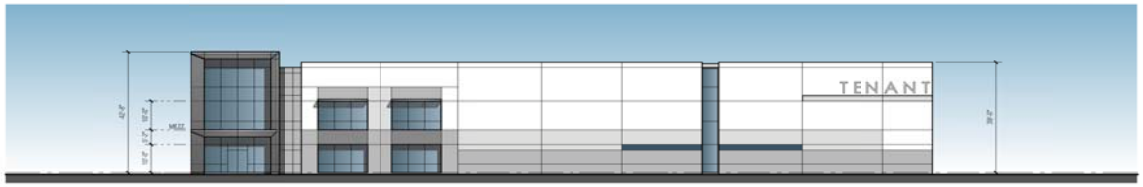
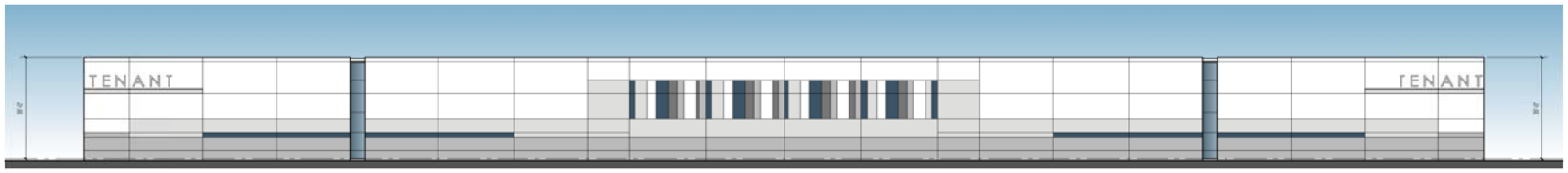
Building 2 Conceptual Elevations

Exhibit 2-4b

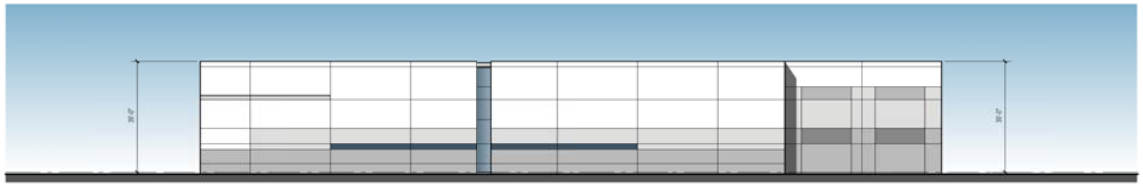
EAST ELEVATION



NORTH ELEVATION - BURNETT ST.



WEST ELEVATION



SOUTH ELEVATION

Source: RGA, Office of Architectural Design, dated April 18, 2017.

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Building 3 Conceptual Elevations

Exhibit 2-4c

2.4.4 PARKING

A total of 638 surface parking spaces are proposed for the 19.09-acre site (Building 1 provides 286 parking spaces; Building 2 provides 175 parking spaces; and Building 3 provides 177 parking spaces).

2.4.5 CIRCULATION IMPROVEMENTS

Site access is currently provided via four driveways along Redondo Avenue and three driveways along East Burnett Street. The project proposes to improve and utilize the existing driveways along East Burnett Street and install an additional driveway approximately 400 feet east of Redondo Avenue; refer to Exhibit 2-3. The existing southern driveway along Redondo Avenue would be improved and the remaining driveways would be removed. A new full access driveway would be installed approximately 645 feet south of East Burnett Street.

Circulation improvements on the adjacent roadways would include widening Redondo Avenue east of the centerline approximately 50 feet, demolishing and reconstructing the sidewalk to provide a 10-foot wide Portland cement concrete (PCC) sidewalk, and relocating curb, gutter, and other utilities as necessary. All street fixtures (including traffic signals), utilities, and easements, would be relocated as necessary in connection with the street widening. The existing traffic signal at the intersection of Redondo Avenue and East Burnett Street would also be modified and upgraded to include pedestrian countdown equipment for all intersection approach paths. The project would also construct a cul-de-sac or hammerhead street termination at the end of East 23rd Street within the easterly portion of the project site.

2.4.6 LANDSCAPING

New ground cover and an irrigation system would be installed along Burnett Street, adjacent to the project site. New tree wells and street trees and irrigation along Redondo Avenue, adjacent to the project site. Additional landscaping would be installed around each of the three light industrial/manufacturing buildings and within on-site parking areas.

2.5 PERMITS AND APPROVALS

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

City of Long Beach

- California Environmental Quality Act Clearance
- Zone Change
- Zoning Code Amendment
- Tentative Parcel Map
- Site Plan Review
- Grading Permit
- Building Permit

Los Angeles Regional Water Quality Control Board

- NPDES Construction General Permit

3.0 INITIAL STUDY CHECKLIST

3.1 BACKGROUND

1.	**Project Title:** 2300 Redondo Avenue Project
2.	**Lead Agency Name and Address:** City of Long Beach 333 West Ocean Boulevard Long Beach, CA 90802
3.	**Contact Person and Phone Number:** Mr. Craig Chalfant Senior Planner 562.670.6368
4.	**Project Location:** Regionally, the project site is located centrally within the City of Long Beach (City), County of Los Angeles (County). Locally, the project site is situated at an existing United States Postal Service (USPS) facility located at 2300 Redondo Avenue, approximately 0.35 mile south of Interstate 405 (I-405) and 0.35 mile west of State Route 19 (SR-19). The 19.09-acre project site is generally flat and includes Assessor's Parcel Number's (APNs) 7218-002-916 and -028-901.
5.	**Project Sponsor's Name and Address:** Pacific Industrial 6272 Pacific Coast Highway, Suite E Long Beach, CA 90803
6.	**General Plan Designation:** The *General Plan* Land Use Map (revised October 2012) designates the project site as "LUD 7; Mixed Uses."
7.	**Zoning:** The *City of Long Beach Zoning Map* zones the project site as "Institutional (I)."
8.	**Description of the Project:** The proposed project would include demolition of the USPS facility and construction of three light industrial/manufacturing buildings, associated parking, and circulation improvements. The new development would encompass 427,565 square feet of light industrial/manufacturing uses with supporting office facilities and 638 parking spaces on a 19.09-acre site. Project implementation would include a zone change and zoning code amendment along with approval of a tentative parcel map and site plan. Additional details regarding the project are provided in Section 2.4, *Project Characteristics*.

9.	**Surrounding Land Uses and Setting:** Surrounding land uses in proximity to the project site are primarily comprised of industrial, office, institutional, governmental, medical, residential, and transportation-related uses. The surrounding land uses are as follows: • *North:* The site is bound by Burnett Street to the north. North of Burnett Street is a large Office Depot warehouse building, governmental buildings (Department of Motor Vehicles [DMV]), institutional building (North-West College [NWC]), and medical facility (AbilityFirst Long Beach Center). • *East:* The PostCity Financial Credit Union and Training Center are located to the east of the project site (which share APN 7218-002-916 with the project site). Other uses to the east include residential, office, and institutional land uses. • *South:* The California National Guard is located south of the project site. • *West:* The site is bound by Redondo Avenue to the west. West of Redondo Avenue are commercial uses including The Wine Country and Rossmoor Pastries, and Tesoro Logistics Hathaway Terminal, a petroleum distribution facility.
10.	**Other public agencies whose approval is required (e.g., permits, financing approval or participation agreement).** Refer to Section 2.5, *Permits and Approvals*, for a description of the permits and approvals anticipated to be required for the project. Additional approvals may be required as the project entitlement process moves forward.

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less Than Significant Impact With Mitigation Incorporated," as indicated by the checklist on the following pages.

✓	Aesthetics		Mineral Resources
	Agriculture and Forestry Resources	✓	Noise
✓	Air Quality		Population and Housing
✓	Biological Resources		Public Services
✓	Cultural Resources		Recreation
✓	Geology and Soils	✓	Transportation/Traffic
	Greenhouse Gas Emissions	✓	Tribal Cultural Resources
✓	Hazards and Hazardous Materials		Utilities and Service Systems
	Hydrology and Water Quality	✓	Mandatory Findings of Significance
	Land Use and Planning		

3.3 LEAD AGENCY DETERMINATION

On the basis of this initial evaluation:

The City of Long Beach finds that the proposed use COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	____
The City of Long Beach finds that although the proposal could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described in Section 4.0 have been added. A MITIGATED NEGATIVE DECLARATION will be prepared.	✓
The City of Long Beach finds that the proposal MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	____
The City of Long Beach finds that the proposal MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	____

Signature	City of Long Beach Agency
Craig Chalfant, Senior Planner Printed Name	December 2017 Date

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Initial Study include:

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

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines* and used by the City of Long Beach in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- *No Impact*. The development will not have any measurable environmental impact on the environment.

- *Less Than Significant Impact*. The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.

- *Less Than Significant Impact With Mitigation Incorporated*. The development will have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.

- *Potentially Significant Impact*. The development will have impacts which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

4.0 ENVIRONMENTAL ANALYSIS

The following is a discussion of potential project impacts as identified in the Initial Study/Mitigated Negative Declaration. Explanations are provided for each item.

4.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?				✓
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c. Substantially degrade the existing visual character or quality of the site and its surroundings?		✓		
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?		✓		

a) Have a substantial adverse effect on a scenic vista?

No Impact. Per the *General Plan*, the nearest designated scenic route to the project site includes East Pacific Coast Highway, approximately 0.64 mile to the southeast of the project site. The views along this scenic route include improved right-of-way and landscaping, as well as varied topography offered by Signal Hill. Development of the proposed project would demolish the existing USPS facility and construct three new buildings on-site. These structures would generally be of similar height to the existing condition (ranging in height from approximately 39 feet to 45 feet tall). Due to the distance, existing topography, and intervening trees and structures, the existing USPS facility is not visible, and the new buildings associated with the project would not be visible. No impact would result in this regard.

Mitigation Measures: No mitigation is required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. There are no officially-designated State scenic highways within proximity to the project sites.[1] The nearest Officially Designated State Scenic Highway is State Route 2, located approximately 30 miles to the north. The nearest Eligible State Scenic Highway (not officially designated) is East Pacific Coast Highway, located approximately 0.64 mile to the southeast of the project site. As described in Response 4.1(a), the proposed project would not affect scenic resources along this eligible highway. Therefore, project implementation would not damage any scenic resource (i.e., trees, rock outcroppings, or historic buildings) within the viewshed of a state scenic highway. No impact would result in this regard.

Mitigation Measures: No mitigation is required.

[1] California Department of Transportation, *California Scenic Highway Mapping System*, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed May 1, 2017.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact With Mitigation Incorporated.

Short-Term Impacts

During short-term construction phase of the proposed project, construction activities would temporarily disrupt views within the project area. The project would include demolition, grading/excavation, and building activities. Although these activities would be temporary in nature and would cease upon completion of construction, these activities and associated equipment would be exposed to surrounding uses, motorists, pedestrians, and bicyclists. Mitigation Measure AES-1 would require that construction staging areas be sited as far away from nearby sensitive viewers as feasible, and that opaque screening material be used to shield public views toward the site throughout the construction process. With implementation of the recommended Mitigation Measure AES-1, the visual character/quality of the site and surroundings would not be substantially degraded during short-term project construction and impacts in this regard would be reduced to less than significant levels.

Long-Term Impacts

The proposed project would include demolition of the existing mail processing and vehicle maintenance facilities and construction of three new light industrial/manufacturing buildings. The new development would encompass 427,565 gross square feet of light industrial/manufacturing facilities with support office and 638 surface parking spaces on the 19.09-acre site. The building heights would vary from approximately 39 feet to 45 feet tall (Building 1 would range in height from 41 feet to 45 feet tall and Buildings 2 and 3 would range in height from approximately 39 feet to 42 feet and 8 inches tall). The proposed buildings would appear similar in massing and scale to existing and surrounding development to the south, west, and north. The buildings would also be appropriately setback from adjoining residential uses (26 feet, 18 inches from the eastern property line).

The project would install new landscaping on-site, including new trees around each of the on-site buildings. Off-site public right-of-way improvements would also be required as part of the *Standard Subdivision Regulations*. New ground cover and an irrigation system would be installed along Burnett Street and new tree wells, street trees, and irrigation would be required along Redondo Avenue, adjacent to the project site.

Circulation improvements on the adjacent roadways would include widening Redondo Avenue east of the centerline approximately 50 feet, demolishing and reconstructing the sidewalk to provide a 10-foot wide Portland cement concrete sidewalk, and relocating curb, gutter, and other utilities as necessary. All street fixtures (including traffic signals), utilities, and easements, would be relocated as necessary in connection with the street widening. The existing traffic signal at the intersection of Redondo Avenue and East Burnett Street would also be modified and upgraded to include pedestrian countdown equipment for all intersection approach paths. The project would also construct a cul-de-sac or hammerhead street termination at the end of East 23rd Street within the easterly portion of the project site. Last, the project would involve replacement of the existing Long Beach Transit bus pad along Redondo Avenue. The reconstructed bus stop would include a roof overhang for additional shelter and architectural seating for bus patrons.

It is acknowledged that the project proposes a zone change and zoning code amendment from “Institutional (I)” to a new subarea of “Planned Development District 7 (PD-7), Long Beach Business Center” oriented toward light industrial uses. However, with approval of the proposed zone change and zoning code amendment, the proposed project would be consistent with allowed building heights and setbacks from adjoining residential uses. Further, the proposed project would be consistent with the existing on-site development as well as the mixed-use character of the surrounding area, particularly to the south, west, and north of the project site. As such, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. Less than significant impacts would occur in this regard.

Mitigation Measures:

AES-1 Construction equipment staging areas shall be located, to the greatest extent feasible, away from nearby existing sensitive viewers (e.g., resident, pedestrians/bicyclists, and motorists), and shall utilize appropriate screening (i.e., temporary fencing with opaque material) to shield public views of construction equipment and material. Prior to issuance of a grading permit, the City of Long Beach City Engineer shall verify that staging locations are identified on final grading/development plans and that appropriate perimeter screening is included as a construction specification.

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

Less Than Significant Impact With Mitigation Incorporated. There are two primary sources of light: light emanating from building interiors that pass through windows and light from exterior sources (i.e., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting). Depending upon the location of the light source and its proximity to adjacent light sensitive uses, light introduction can be a nuisance, affecting adjacent areas and diminishing the view of the clear night sky.

The proposed project is located within an urbanized area of the City of Long Beach. Currently, light is being emitted from the project site as a result of security lighting in the surface parking lot, building entries, loading dock areas, and vehicle headlights accessing the existing driveways and the parking lot. Existing street lighting is also provided along Redondo Avenue and Burnett Street. Areas surrounding the project site are urbanized and contain various sources of light and glare as well. Specifically, light and glare in the area is generated from the light emanating from building interiors and light from exterior sources (i.e., building illumination, parking lot lighting, and security lighting) associated with adjacent industrial, business, and residential land uses.

Pursuant to the *LBMC*, all construction activities may only occur between the hours of 7:00 AM and 7:00 PM, Monday through Friday, and between the hours of 9:00 AM and 6:00 PM on Saturday. Construction activities are prohibited on Sundays. Thus, as required by the *LBMC*, no nighttime construction activities would occur. During operations of the project, similar nighttime security lighting, parking lot lighting, and vehicle headlights along project driveways would result compared to the existing condition. According to the *Long Beach Business Center PD-7*, all parking lots are required to be illuminated with lights directed and shielded to prevent light intrusion to adjacent sites. The light standards are not permitted to exceed the height of the principal use structure, or one foot for each two feet of the distance between the light standard and the nearest property line (whichever is greater). All lights must be illuminated to the applicable standards of the Illuminating Engineers Society. For lots 4 through 10, the following standards must be complied with:

i. Night lighting of the eastern parking area must be designed in a manner which prevents light spillover to adjacent residential uses.

ii. No more than 0.4-foot candles are permitted.

In order to ensure that proposed lighting does not spill over onto off-site uses per the standards identified above, including adjacent residential uses, lighting would be required to be focused and fixtures would be shielded to contain lighting on-site and below the horizontal plane (Mitigation Measure AES-2). Proposed building materials is anticipated to be similar in character to the existing buildings on-site and in the area for daytime glare. The use of highly reflective glass, potentially resulting in daytime glare impacts is not permitted. Therefore, with adherence to the *Long Beach Business Center PD-7* and Mitigation Measure AES-2, impacts in this regard would be less than significant.

Mitigation Measure:

AES-2 The project applicant shall ensure that any exterior lighting does not spill over onto any adjacent properties. Prior to issuance of any building permit, the project applicant shall prepare and submit an Outdoor Lighting Plan to the City of Long Beach Development Services Department, for review and approval, that includes a footcandle map illustrating the amount of light from the proposed project at adjacent light sensitive receptors. All exterior light fixtures shall be shielded or directed away from adjoining uses. The plan shall demonstrate consistency with *Long Beach Business Center PD-7* lighting standards.

4.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d. Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The proposed light industrial/manufacturing facilities would be constructed within an urbanized area in the City of Long Beach. The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[1] According to the *LBMC*, the City of Long Beach does not provide zoning for agricultural use. Thus, the project would not convert prime farmland, unique farmland, or farmland of statewide importance to non-agricultural uses. No impact would occur in this regard.

Mitigation Measures: No mitigation is required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The project site is zoned as "Institutional (I)" by the *City of Long Beach Zoning Map*, dated October 2013. As stated in Response 4.2(a), the City of Long Beach does not provide zoning for agricultural use. Thus, no zoning for agricultural use currently applies to the project site or the surrounding areas. Additionally, the project site is not a part of a Williamson Act contract. Thus, no impacts would occur in this regard.

[1] California Department of Conservation, *Farmland Mapping and Monitoring Program, California Important Farmland Finder*, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx, accessed on April 28, 2017.

Mitigation Measures: No mitigation is required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. Refer to Responses 4.2(a) and 4.2(b). No zoning for forest land or timberland exists within the project site, and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Refer to Responses 4.2(b) and 4.2(c). No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. As stated above in Responses 4.2(a) through 4.2(c), the project site occurs within an urbanized area and are void of agricultural or forest resources. Thus, there is no potential for the conversion of these resources and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Conflict with or obstruct implementation of the applicable air quality plan?		✓		
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		✓		
c. 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)?		✓		
d. Expose sensitive receptors to substantial pollutant concentrations?		✓		
e. Create objectionable odors affecting a substantial number of people?			✓	

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact With Mitigation Incorporated. The proposed project is located within the South Coast Air Basin (Basin), which is governed by the South Coast Air Quality Management District (SCAQMD). Consistency with the SCAQMD *2016 Air Quality Management Plan for the South Coast Air Basin* (*2016 AQMP*) means that a project is consistent with the goals, objectives, and assumptions set forth in the *2016 AQMP* that are designed to achieve Federal and State air quality standards. According to the SCAQMD CEQA Air Quality Handbook, in order to determine consistency with the *2016 AQMP*, two main criteria must be addressed:

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Since the consistency criteria identified under the first criterion pertains to pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed in Response 4.3(d), below, localized concentrations of carbon monoxide (CO), nitrogen oxides (NO_X), and particulate matter (PM_{10} and $PM_{2.5}$) would be less than significant. Therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations. Because reactive organic gasses (ROGs) are not a criteria pollutant, there is no ambient standard or localized threshold for ROGs. Due to the role ROGs plays in ozone formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established.

b) Would the project cause or contribute to new air quality violations?

As discussed below in Response 4.3(b), the proposed project would result in emissions that would be below the SCAQMD thresholds with the implementation of Mitigation Measures AQ-1 through AQ-3. Therefore, the proposed project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

The proposed project would result in less than significant impacts with regard to localized concentrations during project construction. As such, the proposed project would not delay the timely attainment of air quality standards or 2016 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and Southern California Association of Governments (SCAG) air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the *2016 AQMP*. Determining whether or not a project exceeds the assumptions reflected in the *2016 AQMP* involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?

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*, three sources of data form the basis for the projections of air pollutant emissions: the *City of Long Beach General Plan* (*General Plan*), SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan and Guide* (*RCPG*), and SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (*RTP/SCS*). The *RTP/SCS* also provides socioeconomic forecast projections of regional population growth.

The project proposes the construction of light industrial/manufacturing facilities. As discussed in Section 4.13, *Population and Housing*, it is not anticipated that implementation of the proposed project would induce substantial population growth within the City either directly or indirectly. As the site currently includes similar uses as those proposed, no amendment to the *General Plan* would be required as part of the project. Implementation of the proposed project would require a zone change and zoning code amendment to replace the existing "Institutional (I)" zoning to a new subarea of "Planned Development District 7 (PD-7), Long Beach Business Center" oriented toward light industrial uses. The PD designation allows for flexible development plans to be prepared for areas of the City which may benefit from the formal recognition of unique or special land uses and the definition of special design policies and standards not otherwise possible under conventional zoning district regulations. With approval of the proposed project, including approval of the proposed zone change and zoning amendment, the zoning of the proposed project would be consistent with the *LBMC*. Therefore, the proposed project is considered consistent with the *General Plan*, and is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the RCPG. 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 City. Additionally, as the SCAQMD has incorporated these same projections into the *2016 AQMP*, it can be concluded that the proposed project would be consistent with the projections.

b) Would the project implement all feasible air quality mitigation measures?

The proposed project would result in less than significant air quality impacts with the implementation of Mitigation Measures AQ-1 through AQ-3. Compliance with emission reduction measures identified by the SCAQMD would be required as identified below in Response 4.3(b). As such, the proposed project meets this AQMP consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth in the AQMP?

The proposed project would serve to implement various policies set forth by the City and SCAG. The proposed project is located within a developed portion of the City and is a redevelopment project in the vicinity of a mix of uses including industrial, residential, and commercial.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The proposed project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. As discussed above, the proposed project's long-term influence would also be consistent with the goals and policies of the AQMP and is, therefore, considered consistent with the SCAQMD's *2016 AQMP*.

Mitigation Measures: Refer to with Mitigation Measures AQ-1 through AQ-3.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact With Mitigation Incorporated.

Short-Term (Construction) Emissions

The project involves construction activities associated with grading, paving, construction, and architectural coating applications. Project construction activities are anticipated to begin in April 2018 and end in October 2019. The 19.09-acre site would be graded; however, earthwork would be balanced. Exhaust emission factors for typical diesel-powered heavy equipment are based on the California Emissions Estimator Model 2016.3.2 (CalEEMod) program defaults. Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site. The analysis of daily construction emissions has been prepared utilizing CalEEMod. Refer to Appendix A, *Air Quality/Greenhouse Gas Data*, for the CalEEMod outputs and results. Table 4.3-1, *Construction Related Emissions*, presents the anticipated daily short-term construction emissions.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading, excavation, and construction is expected to be short-term and would cease upon project completion. Additionally, most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM_{10} (particulate matter smaller than 10 microns) generated as a part of fugitive dust emissions. PM_{10} poses a serious health hazard alone or in combination with other pollutants. $PM_{2.5}$ is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. $PM_{2.5}$ is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and sulfur oxides (SO_X) combining with ammonia. $PM_{2.5}$ components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Table 4.3-1
Construction Related Emissions

Construction Emissions	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 1						
Unmitigated Emissions	48.41	88.56	41.32	0.10	10.44	6.01
Mitigated Emissions[2]	48.41	88.56	41.32	0.10	6.13	4.01
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded After Mitigation?	***No***	***No***	***No***	***No***	***No***	***No***
Year 2						
Unmitigated Emissions	47.84	37.07	36.52	0.10	6.10	2.68
Mitigated Emissions[2]	47.84	37.07	36.52	0.10	5.87	2.62
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Is Threshold Exceeded After Mitigation?	***No***	***No***	***No***	***No***	***No***	***No***

ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter up to 10 microns; $PM_{2.5}$ = particulate matter up to 2.5 microns

Notes:
1. Emissions were calculated using the California Emissions Estimator Model (CalEEMod), as recommended by the SCAQMD.
2. The reduction/credits for construction emissions are based on measures included in CalEEMod and as required by the SCAQMD through Rule 403. This includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour.

Refer to Appendix A, *Air Quality/Greenhouse Gas Data*, for detailed model input/output data.

Mitigation Measure AQ-1 would implement dust control techniques (i.e., daily watering), limitations on construction hours, and adherence to SCAQMD Rules 402 and 403 (which require watering of inactive and perimeter areas, track out requirements, etc.), to reduce PM_{10} and $PM_{2.5}$ concentrations. It should be noted that these reductions were applied in CalEEMod. The recommended mitigation measures would be required to ensure compliance with SCAQMD Rules and Regulations, which would be verified and enforced through the City's development review process. As depicted in Table 4.3-1, total PM_{10} and $PM_{2.5}$ emissions would not exceed the SCAQMD thresholds during construction. Thus, construction air quality impacts would be less than significant.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As presented in Table 4.3-1, construction equipment and worker vehicle exhaust emissions would be below the established SCAQMD thresholds. Therefore, air quality impacts from equipment and vehicle exhaust emission would be less than significant.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. As required, all architectural coatings for the proposed project structures would comply with SCAQMD Regulation XI, Rule 1113 – Architectural Coating. Rule 1113 provides specifications on painting practices as well as regulates the ROG content of paint. ROG emissions associated with the proposed project would be less than significant; refer to Table 4.3-1.

Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by the California Air Resources Board (CARB) in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (August 2000), serpentinite and ultramafic rocks are not known to occur within the project area. Thus, there would be no impact in this regard.

Total Daily Construction Emissions

In accordance with the SCAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. CalEEMod allows the user to input mitigation measures such as watering the construction area to limit fugitive dust. Mitigation measures that were input into CalEEMod allow for certain reduction credits and result in a decrease of pollutant emissions. Reduction credits are based upon studies developed by CARB, SCAQMD, and other air quality management districts throughout California, and were programmed within CalEEMod. Table 4.3-1 also provides the reduction associated with recommended mitigation measures calculated by CalEEMod.

As indicated in Table 4.3-1, impacts would be less than significant for all criteria pollutants during construction. Implementation of standard SCAQMD measures (required by Mitigation Measure AQ-1) would further reduce these emissions. Thus, construction related air emissions would be less than significant.

Long-Term (Operational) Emissions

Long-term criteria air pollutant emissions would result from the operation of the proposed project. Long-term emissions are categorized as area source emissions, energy demand emissions, and operational emissions. Operational emissions would result from automobile, truck, and other vehicle sources associated with daily trips to and from the project. Area source emissions are the combination of many small emission sources that include use of outdoor landscape maintenance equipment, use of consumer products such as cleaning products, and periodic repainting of the proposed project. Energy demand emissions result from use of electricity and natural gas.

Mobile Source Emissions

Light industrial/manufacturing facilities are commonly associated with substantial diesel emissions due to the high volume of heavy duty trucks that serve them. Diesel Particulate Matter (DPM) from internal combustion engines has been classified as a carcinogen by the California Air Resources Board (CARB). Project-generated vehicle emissions have been estimated using the CalEEMod model. Trip generation rates associated with the proposed project were based on traffic data within the Transportation Impact Analysis (TIA). The proposed project would result in 1,966 daily trips. According to the TIA, 80 percent of trips would be passenger cars (1,310 daily trips) and 20 percent would be trucks (328 daily trips). The fleet mix in CalEEMod has been adjusted to account for project specific vehicle classifications.

Table 4.3-2, *Long-Term Air Emissions (Unmitigated)*, presents the anticipated mobile source emissions. As shown in Table 4.3-2, unmitigated emissions generated by vehicle traffic associated with the project would not exceed established SCAQMD thresholds for ROG, CO, SO_x, PM_{10}, and $PM_{2.5}$. However, unmitigated emissions generated by vehicle traffic associated with the project would exceed established SCAQMD thresholds for NO_X by 5.56 pounds per day.

Table 4.3-2
Long-Term Air Emissions (Unmitigated)

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	9.67	0.00	0.11	0.00	0.00	0.00
Energy	0.01	0.12	0.10	0.00	0.01	0.01
Mobile (Passenger Cars)	1.68	9.09	24.22	0.08	6.64	1.84
Mobile (Trucks)	1.43	42.78	11.18	0.1	2.68	0.9
Off-road	0.96	8.57	7.17	0.01	0.66	0.61
Total Proposed Unmitigated Emissions	***13.75***	***60.56***	***42.78***	***0.19***	***9.99***	***3.36***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded? (Significant Impact?)	*No*	***Yes***	*No*	*No*	*No*	*No*

Notes:
1. Based on CalEEMod results, worst-case seasonal emissions for area and mobile emissions have been modeled.
2. The numbers may be slightly off due to rounding.
3. Refer to Appendix A, *Air Quality/Greenhouse Gas Data*, for assumptions used in this analysis.

As shown in Table 4.3-3, *Long-Term Air Emissions (Mitigated)*, implementation of Mitigation Measures AQ-2 and AQ-3 would reduce NO_X emissions to a less than significant level. Mitigation Measure AQ-2 includes two options to reduce NO_X emissions. Option 1 would limit the number of diesel-fueled trucks accessing the project site to 290 trucks per day if the truck fleet is wholly or partially older than the U.S. EPA/CARB truck engine standards for the 2010 model year. Alternatively, Option 2 would ensure that all diesel-fueled trucks accessing the project site meet the U.S. EPA/CARB truck engine standards for the 2010 model year or better (Mitigation Measure AQ-2). Either (but not both) of these options can be implemented to reduce NO_X emissions to a less than significant level. Mitigation Measure AQ-3 would ensure on-site off-road equipment (e.g., forklifts, yard trucks/hostlers, etc.) are electric powered as assumed in the CalEEMod operational emissions for the project. The recommended mitigation measures would be required to ensure compliance with SCAQMD thresholds, which would be verified and enforced through the City's site plan review process.

Stationary Source Emissions

Stationary source emissions would be generated due to an increased demand for electrical energy and natural gas with the development of the proposed project. This assumption is based on the supposition that those power plants supplying electricity to the site are utilizing fossil fuels. Electric power generating plants are distributed throughout the Basin and western United States, and their emissions contribute to the total regional pollutant burden. The primary use of natural gas by the proposed land uses would be for combustion to produce space heating, water heating, and other miscellaneous heating, or air conditioning, consumer products, and landscaping. As indicated in Table 4.3-2, the SCAQMD threshold for NO_x has been exceeded; however, mobile (truck) emissions is the greatest contributor of the NO_x pollutant in this project. Stationary source emissions from the proposed project would not exceed SCAQMD thresholds. If stationary sources, such as backup generators, are installed on-site, they would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and

California ambient air quality standards in the Basin. Backup generators would be used only in emergency situations, and would not contribute a substantial amount of emission capable of exceeding SCAQMD thresholds. Thus, impacts form stationary source emissions would be less than significant.

Table 4.3-3
Long-Term Air Emissions (Mitigated)

Emissions Source	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Option 1 (Limit Trucks to 290 Trips per Day)						
Area	9.67	0.00	0.11	0.00	0.00	0.00
Energy	0.01	0.12	0.10	0.00	0.01	0.01
Mobile (Passenger Cars)	1.68	9.09	24.22	0.08	6.64	1.84
Mobile (Trucks)	1.23	36.67	9.58	0.08	2.30	0.77
Off-road	0.96	8.57	7.17	0.01	0.66	0.61
Total Proposed Mitigated Emissions	**13.55**	**54.45**	**41.18**	**0.17**	**9.61**	**3.23**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded? (Significant Impact?)	*No*	*No*	*No*	*No*	*No*	*No*
Option 2 (EPA/CARB Model Year 2010 Truck Emission Standards)						
Area	9.67	0.00	0.11	0.00	0.00	0.00
Energy	0.01	0.12	0.10	0.00	0.01	0.01
Mobile (Passenger Cars)	1.68	9.09	24.22	0.08	6.64	1.84
Mobile (Trucks)	1.43	33.79	11.18	0.10	2.68	0.90
Off-road	0.96	8.57	7.17	0.01	0.66	0.61
Total Proposed Mitigated Emissions	***13.75***	***51.57***	***42.78***	***0.19***	***9.99***	***3.36***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Is Threshold Exceeded? (Significant Impact?)	*No*	*No*	*No*	*No*	*No*	*No*

Notes:
1. Based on CalEEMod results, worst-case seasonal emissions for area and mobile emissions have been modeled.
2. The numbers may be slightly off due to rounding.
3. Refer to Appendix A, *Air Quality Emissions Data*, for assumptions used in this analysis.

Mitigation Measures:

AQ-1 Prior to ground disturbance associated with the project, the City of Long Beach shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered every three hours during daily construction activities when dust is observed migrating from the project site to prevent excessive amounts of dust;

- Apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas to reduce the need for watering after dust is observed to be migrating from the site. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;

- Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;
- All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
- Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
- Track-out devices such as gravel bed track-out aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes. Alternatively, a wheel washer shall be used at truck exit routes;
- On-site vehicle speed shall be limited to 15 miles per hour;
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site; and
- Trucks associated with soil-hauling activities shall avoid residential streets and utilize City-designated truck routes to the extent feasible.

AQ-2 Prior to the issuance of a Certificate of Occupancy, the project applicant shall provide a plan to the City of Long Beach City Engineer illustrating a program for compliance with the following measures:

- During project operations, the project applicant shall limit the number of diesel-fueled trucks accessing the project site to a maximum of 290 trucks per day if the truck fleet is wholly or partially older than the United States Environmental Protection Agency (U.S. EPA)/California Air Resources Board (CARB) truck engine standards for the 2010 model year. Alternatively, the project applicant shall ensure that all diesel-fueled trucks accessing the project site meet the U.S. EPA/CARB truck engine standards for the 2010 model year or better. This requirement shall be documented within project plans and specifications and verified by the City of Long Beach prior to Site Plan Review.
- Prohibit all vehicles from idling in excess of five minutes, both on- and off-site. Additionally, signs shall be posted informing truck drivers about the CARB diesel idling regulations and the health effects of diesel particulate matter.
- Post signs on the interior and exterior of the project site near the gates, requiring the following:
  - Truck drivers shall turn off engines when not in use;
  - Trucks shall not idle for more than five minutes; and
  - Telephone numbers of the California Air Resources Board to report violations.

AQ-3 During project operations, the project applicant shall ensure on-site off-road equipment (e.g., forklifts, yard trucks/hostlers, etc.) are electrically powered. This requirement shall be documented within project plans and specifications and verified by the City of Long Beach prior to Site Plan Review.

c) 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)?

Less Than Significant Impact With Mitigation Incorporated.

Cumulative Construction Impacts

With respect to the proposed project's construction-period air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the *2016 AQMP* pursuant to Federal Clean Air Act (FCAA) mandates. As such, the proposed project would comply with SCAQMD Rule 403 requirements, and implement all feasible mitigation measures (Mitigation Measure AQ-1). Rule 403 requires that fugitive dust be controlled with the best available control measures in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. In addition, the proposed project would comply with the adopted *2016 AQMP* emissions control measures. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted *2016 AQMP* emissions control measures) would also be imposed on construction projects throughout the Basin, which would include related projects.

Cumulative Long-Term Impacts

As discussed previously, the SCAQMD threshold for NO_x would be exceeded during project operations and would result in long-term air quality impacts if left unmitigated. Mitigation Measure AQ-2 would limit the number of diesel-fueled trucks accessing the project site to 290 trucks per day if the truck fleet is wholly or partially older than the U.S. EPA/CARB truck engine standards for the 2010 model year; or would ensure that all diesel-fueled trucks accessing the project site meet the U.S. EPA/CARB truck engine standards for the 2010 model year or better. Mitigation Measure AQ-3 would ensure on-site off-road equipment (e.g., forklifts, yard trucks/hostlers, etc.) are electrically powered as assumed in the CalEEMod operational emissions for the project. Additionally, adherence to SCAQMD rules and regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Emission reduction technology, strategies, and plans are constantly being developed. With implementation of Mitigation Measures AQ-2 and AQ-3, the proposed project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, adherence to Mitigation Measures AQ-2 and AQ-3 would reduce potential cumulative operational impacts to less than significant levels.

Mitigation Measures: Refer to Mitigation Measure AQ-1, AQ-2, and AQ-3.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact With Mitigation Incorporated. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The closest sensitive receptors to the project site are residential uses immediately to the east. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds (LSTs) for construction and operations impacts (area sources only). The CO hotspot analysis following the LST analysis addresses localized mobile source impacts.

Localized Significance Thresholds (LST)

LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST lookup tables for one, two, and five acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD notes that any project over five acres may need to perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. The project is located within Sensitive Receptor Area (SRA) 4, South Los Angeles County Coastal.

Construction

Based on the SCAQMD guidance on applying LSTs, project construction on the approximately 19.09-acre site would disturb approximately 4 acres per day. As the SCAQMD LST guidance only has thresholds for 1, 2, and 5 acres, the 2-acre threshold was conservatively used. The nearest sensitive receptors are residential uses located east of the project site. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. Given the proximity to the existing residences, the lowest available LST values for 25 meters were used per the LST guidance. Table 4.3-4, *Localized Significance of Construction Emissions*, shows the localized unmitigated and mitigated construction-related emissions. It is noted that the localized emissions presented in Table 4.3-4 are less than those in Table 4.3-1 because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from hauling activities). As seen in Table 4.3-4, mitigated on-site emissions would not exceed the LSTs for SRA 4.

Table 4.3-4
Localized Significance of Construction Emissions

Source	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Year 1				
Total Unmitigated On-Site Construction Emissions[2]	59.52	35.09	10.12	5.90
Total Mitigated Emissions On-Site[2]	59.52	35.09	5.84	3.91
Localized Significance Threshold[1]	*66*	*827*	*7*	*5*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 2				
Total Unmitigated On-Site Construction Emissions[3]	1.84	1.84	0.13	0.13
Total Mitigated Emissions On-Site[3]	1.84	1.84	0.13	0.13
Localized Significance Threshold[1]	*66*	*827*	*7*	*5*
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Notes:
1. The Localized Significance Threshold was determined using Appendix C of the SCAQMD *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the anticipated daily acreage disturbance for construction (approximately 4 acres; however, the 2-acre threshold was conservatively used), the distance to sensitive receptors, and the source receptor area (SRA 4).
2. For construction year 1, the grading phase is presented as the worst-case scenario for NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions.
3. For construction year 2, the architectural coating phase is presented as the worst-case scenario for NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions.

Refer to Appendix A, *Air Quality Emissions Data*, for detailed model input/output data.

Operations

As seen in Table 4.3-5, *Localized Significance of Operational Emissions*, project-related unmitigated operational area source emissions would be negligible and would be below the LSTs. Therefore, operational LST impacts would be less than significant in this regard.

Table 4.3-5
Localized Significance of Operational Emissions

Source	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Total Area Source Emissions	0.00	0.11	0.00	0.00
Localized Significance Threshold[2]	*99*	*1,503*	*4*	*2*
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Note:
1. The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The Localized Significance Threshold was based on the total acreage, the distance to sensitive receptors, and the source receptor area (SRA 4).

Toxic Air Contaminants

A Health Risk Assessment (HRA) for the proposed project was prepared in accordance with the requirements of the SCAQMD and guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to determine if health risks are likely to occur from the proposed project. Specifically, the HRA addresses the potential for significant health risks associated with diesel particulate emissions from truck traffic generated by the operations within the proposed project area. The HRA focused on emissions of diesel particulate from trucks, as diesel particulate is the risk driver within the Basin.

In order to determine whether or not a proposed project would cause a significant effect on the environment, the impact of the project must be determined by examining the types and levels of air toxics generated and the associated impacts on factors that affect air quality. While the final determination of significance thresholds is within the purview of the lead agency pursuant to the State CEQA Guidelines, the SCAQMD recommends that the following air pollution thresholds be used by lead agencies in determining whether the proposed project is significant. If the lead agency finds that the proposed project has the potential to exceed the air pollution thresholds, the project should be considered significant. The thresholds for air toxic emissions are as follows.

- Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million.

- Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of 1 in one million.

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a “hazard index,” expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). A REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

Air dispersion modeling for the HRA was performed using the U.S. EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing

height. Surface and upper air meteorological data from the Long Beach Airport Monitoring Station provided by the SCAQMD was selected as being the most representative meteorology.

Carcinogenic Hazards

An HRA and dispersion modeling was conducted for the proposed project to determine if the truck trips occurring during project operations would result in new health risk impacts. The modeling assumed a mix of gas and diesel trucks based on CARB EMFAC2014 data.

Based on the modeling results for the project, the maximum annual average diesel PM_{10} emission concentrations resulting from operation of the project (382 daily trucks) would be 0.009 µg/m^3 at the greatest. The maximum pollutant concentration would be experienced at the southeast corner of the project site near proposed Building 1. The expected annual average diesel PM_{10} emission concentrations at the closest sensitive receptors (adjoining residential uses to the east of the project site) would be 0.001 µg/m^3.[1] Cancer risk calculations are based on 70-, 30-, and 9-year exposure periods. The highest calculated carcinogenic risk from the project is 0.88 per million for 70-year exposure, 0.75 per million for 30-year exposure, and 0.54 per million for 9-year exposure. As such, impacts related to cancer risk and PM_{10} concentrations from heavy trucks would be less than significant at the nearest residences to the east of the project site.

Non-Carcinogenic Hazards

The significance thresholds for toxic air contaminant (TAC) exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index associated with the emissions from the project would be 0.0002 and 0.01, respectively. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.). The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service (LOS) D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections.

The Basin is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles

[1] The calculations conservatively assume no cleaner technology with lower emissions in future years.

traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the *Federal Attainment Plan for Carbon Monoxide* (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin, and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the proposed project, since it represents a worst-case scenario with heavy traffic volumes within the Basin. Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections near the project site due to the volume of traffic in the study area (i.e., the current traffic volume along Redondo Avenue is approximately 24,500 ADT[2]). Therefore, impacts in regard to CO hotspots would be less than significant.

Mitigation Measures: Refer to Mitigation Measure AQ-1 through AQ-3.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The proposed project of light industrial/manufacturing facilities, and end-users have not been identified. However, the proposed project would likely include light industrial, storage, or distribution uses. Therefore, the proposed project would not produce odors that would affect a substantial number of people considering that the proposed project would not result in heavy manufacturing activities. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

[2] Kittelson and Associates, *Transportation Impact Analysis,* October 2017.

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4.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		✓		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✓
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		✓		
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			✓	
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

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

Less Than Significant Impact With Mitigation Incorporated. The project site is located within an urbanized area and is currently developed with the USPS facility and associated parking. The project site does not contain habitat supportive of special status plant or wildlife species. Project implementation would not result in a substantial adverse effect, either directly or through habitat modifications, on any sensitive species. Thus, no impacts in this regard would occur.

However, the proposed project may result in the removal of ornamental vegetation within existing USPS parking areas. Thus, the project could result in potential impacts to nesting birds protected by the Migratory Bird Treaty Act (MBTA). The MBTA prohibits activities that result in the direct take (defined as killing or possession) of a migratory bird. The proposed project has the potential to impact nesting birds if construction activities occur during the nesting season. Mitigation Measure BIO-1 has been provided to reduce impacts in this regard to less than significant levels.

Mitigation Measures:

BIO-1 If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from February 1 - August 31), a pre-construction clearance survey for nesting birds shall be conducted within 3 days prior to any ground disturbing activities.

The biologist conducting the clearance survey shall document the negative results if no active bird nests are observed on the project site during the clearance survey with a brief letter report indicating that no impacts to active bird nests would occur before construction can proceed. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Results of the pre-construction survey and any subsequent monitoring shall be provided to the California Department of Fish and Wildlife (CDFW) and other appropriate agency.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The project site is completely developed and surrounded by developed uses. No known riparian habitats or sensitive natural communities are present on-site. Thus, no impact would result in this regard.

Mitigation Measures: No mitigation is required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. There are no federally protected wetlands present on the project site. Project implementation would not impact federally protected wetlands through direct removal, filling, hydrological interruption or other means. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact With Mitigation Incorporated. The project site exists entirely within a developed and predominantly paved, urbanized area. The proposed light industrial/manufacturing facilities would be constructed on previously graded and developed areas that contain no biological resources other than sparsely spaced ornamental landscaped features. Therefore, the site does not function as a wildlife movement corridor. Project implementation would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. In addition, Mitigation Measure BIO-1 would ensure that impacts to migratory birds during the nesting season would be reduced to a less than significant level. Thus, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures: Refer to Mitigation Measure BIO-1.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact. Vegetation removal associated with the proposed project would be limited to removal of existing ornamental trees and landscaping. The project would include new ground cover and an irrigation system along East Burnett Street and new tree wells, street trees with root barriers, and irrigation along Redondo Avenue, as well as landscaping within the proposed parking medians. This landscaping and irrigation would be privately maintained. Chapters 14.28 and 21.42 of the *LBMC* contains regulations on tree and shrub planting, removal, and maintenance, including the protection of all trees located along the street, alley, court, or other public places during construction activities. Additionally, Chapter 21.42 requires approval of a Landscape Document Package prior to the issuance of building permits. Thus, with adherence to Chapters 14.28 and 21.42 of the *LBMC*, impacts would be reduced to less than significant levels.

Mitigation Measures: No mitigation is required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. According to the U.S. Fish and Wildlife Service's *HCP/NCCP Planning Areas in Southern California Map*[1] and *California Regional Conservation Plans Map*[2] the project site is neither located within Natural Community Conservation Plan (NCCP) nor Habitat Conservation Plan (HCP). As such, there would be no impact in this regard.

Mitigation Measures: No mitigation is required.

[1] U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, *HCP/NCCP Planning Areas in Southern California*, October 2008.

[2] California Department of Fish and Wildlife, *California Regional Conservation Plans Map*, August 2015.

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4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?		✓		
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?		✓		
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		
d. Disturb any human remains, including those interred outside of formal cemeteries?			✓	

This section is based on the *Cultural Resources Assessment for the 2300 Redondo Avenue Project* (Cultural Assessment) prepared by Cogstone (dated September 2017) and the *Paleontological Resources Assessment for the 2300 Redondo Avenue Project* (Paleontological Assessment) prepared by Cogstone (dated September 2017); refer to Appendix B, *Cultural Assessment*.

a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?

Less Than Significant Impact With Mitigation Incorporated. According to the literature/records search performed as part of the Cultural Assessment, there are no previously recorded cultural resources present in the project area. The Cultural Assessment concluded that the project area has a low probability for cultural resources. Three previously recorded cultural resources are located within a one mile radius of the project area. These consist of one prehistoric site, and two historic resources. None of these three previously recorded resources would be affected by implementation of the project.

Based on historic aerial images and topographic maps utilized during the Cultural Assessment, three historic structures once stood within the project area; two on the northwestern boundary of the project area along Redondo Avenue and a circular structure located along the south/center boundary of the project area. However, these structures have been demolished, and no historic structural remains were located during the pedestrian survey performed as part of the Cultural Assessment.

The project site is not located within proximity to historical land mark locations or within a designated Historic District, as shown on Figure 12, *City of Long Beach Designated Landmarks*, and Figure 13, *City of Long Beach Designated Historic Districts*, of the Historic Preservation Element of the *General Plan*, respectively. Existing on-site structures consist of the USPS facility (proposed for demolition). This facility is not associated with significant events, important persons, or distinctive characteristics of a type, period, or method of construction; representing the work of an important creative individual; or does not possess high artistic values. As such, demolition of the USPS facility would not result in a significant impact to a historic resource. However, as part of the Cultural Assessment, three local historical societies (Long Beach Historical Society, Long Beach Heritage, and Signal Hill Historical Society) were contacted requesting information regarding the historical context of the USPS facility. One response letter was received from Long Beach Heritage organization on August 21, 2017. The letter noted that a dedication plaque is located on the USPS facility and requested that the plaque be saved and donated to the Long Beach Historical Society (Mitigation Measure CUL-1). Thus, with implementation of Mitigation Measure CUL-1, potential impacts regarding a historical resource would be reduced to a less than significant level.

Mitigation Measures:

CUL-1 Prior to initiation of any building demolition activities on the project site, the construction contractor shall ensure that the existing dedication plaque currently located on the United States Postal Service (USPS) facility be removed and donated to the Long Beach Historical Society for curation. This requirement shall be denoted within project plans and specifications, and subject to verification by the City of Long Beach City Engineer.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?

Less Than Significant Impact With Mitigation Incorporated. Based on the Cultural Assessment, given the extensive disturbance that has occurred within site limits, no archaeological resources would be affected by the proposed project. However, in the unlikely event resources are discovered during ground-disturbing activities, compliance with Mitigation Measure CUL-2, which provides instructions in the event a material of potential cultural significance is uncovered, would reduce potential impacts to a less than significant level. For a discussion of potential project impacts to tribal cultural resources, refer to Section 4.17, *Tribal Cultural Resources*.

Mitigation Measures:

CUL-2 If evidence of subsurface cultural resources is found during excavation and other ground-breaking activities, all work within 50 feet of the discovery shall cease and the construction contractor shall contact the City of Long Beach Development Services Department. With direction from the Development Services Department, an archaeologist certified by the County of Los Angeles shall be retained to evaluate the discovery prior to resuming grading in the immediate vicinity of the find. If warranted, the archaeologist shall develop a plan of mitigation which may include, but shall not be limited, to, salvage excavation, laboratory analysis and processing, research, curation of the find in a local museum or repository, and preparation of a report summarizing the find.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact With Mitigation Incorporated. Based on the Paleontological Assessment, no previous fossil localities have been recorded within the project boundaries. Ninety-nine localities with almost 1,000 fossil specimens were identified within 5 miles of the proposed project area. Seventeen localities were identified from undifferentiated Quaternary deposits, which contained fossil vertebrates and another two with 570 specimens of marine invertebrates. From the Palos Verdes Sand, seventy-six localities producing 380 fossil specimens were identified near to the project. The Paleontological Assessment concluded that the project is paleontologically sensitive for all excavations more than five feet in depth. However, the Paleontological Assessment further concluded that based on planned depths of impact, it is considered unlikely that fossils meeting significance criteria would be encountered. In the unlikely event resources are discovered during ground-disturbing activities, compliance with Mitigation Measure CUL-3, which provides instructions in the event a material of potential paleontological significance is uncovered, would reduce potential impacts to a less than significant level.

Mitigation Measures:

CUL-3 If evidence of subsurface paleontological resources is found during excavation and other ground-breaking activities, all work within 50 feet of the discovery shall cease and the construction contractor shall contact the City of Long Beach Development Services Department. With direction from the Development Services Department, a paleontologist certified by the County of Los Angeles shall evaluate the find. If warranted, the paleontologist shall prepare and complete a standard Paleontological Resources Mitigation Program for the salvage and curation of identified resources.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. No conditions exist that suggest human remains are likely to be found on the project site. Due to the level of past disturbance on-site, it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be encountered during earth removal or disturbance activities. If human remains are found, those remains would require proper treatment, in accordance with applicable laws. State of California Public Resources Health and Safety Code Section 7050.5-7055 describe the general provisions for human remains. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site. As required by State law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendant." If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overlay adjacent remains until the County coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with existing State regulations, which detail the appropriate actions necessary in the event human remains are encountered, impacts in this regard would be considered less than significant.

Mitigation Measures: No mitigation is required.

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4.6 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			✓	
2) Strong seismic ground shaking?		✓		
3) Seismic-related ground failure, including liquefaction?		✓		
4) Landslides?			✓	
b. Result in substantial soil erosion or the loss of topsoil?			✓	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		✓		
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		✓		
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. Southern California, including the project area, is subject to the effects of seismic activity due to the active faults that traverse the area. Active faults are defined as those that have experienced surface displacement within Holocene time (approximately the last 11,000 years) and/or are in a State-designated Alquist-Priolo Earthquake Fault Zone.

According to the Alquist-Priolo fault zone maps prepared by the California Geological Survey (CGS), the project site is not located within a fault zone.[1] An Alquist-Priolo Special Study zone is located approximately 750 feet south of the project site. The probability of damage because of surface ground rupture within the project site is low due to the distance to the known active faults and special study zones. Thus, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

[1] State of California Department of Conservation, *Regulatory Maps*, http://maps.conservation.ca.gov/cgs/information warehouse/index.html?map=regulatorymaps, accessed April 21, 2017.

2) Strong seismic ground shaking?

Less Than Significant Impact With Mitigation Incorporated. Southern California has numerous active seismic faults subjecting residents to potential earthquake and seismic-related hazards. Seismic activity poses two types of potential hazards for residents and structures, categorized either as primary or secondary hazards. Primary hazards include ground rupture, ground shaking, ground displacement, subsidence, and uplift from earth movement. Primary hazards can also induce secondary hazards such as ground failure (lurch cracking, lateral spreading, and slope failure), liquefaction, water waves (seiches), movement on nearby faults (sympathetic fault movement), dam failure, and fires. Both primary and secondary hazards pose a threat to the community as a result of the project's proximity to active regional faults.

The region surrounding the Long Beach area is characterized by a relatively high seismic activity. The greatest damage from earthquakes results from ground shaking. Ground shaking is generally most severe near quake epicenters and generally become weaker further out from the epicenter. Based on Figure 2*, Fault Map with Special Study Zones*, of the *General Plan*, the closest major fault to the project site (along which historic [last 200 years] displacement has occurred) is the Newport-Inglewood fault, which is located approximately 750 feet south of the project site. As such, the project site may be subject to strong seismic shaking during a seismic event, as is the case with the vast majority of areas of southern California.

Implementation of the proposed project would construct a light industrial/manufacturing facility, including three buildings, associated parking, and circulation improvements. Due to the location of the project site, which is within seismically-active region, there is potential for seismic ground shaking. However, building and structures that would be constructed for the project would be subject to the City's existing construction ordinances and the California Building Code (CBC) in order to minimize hazards during a seismic event. The CBC includes standards related to soils and foundations, structural design, building materials, and structural testing and inspections. Mitigation Measure GEO-1 would require the project applicant to prepare a geotechnical report that addresses seismic design parameters consistent with the *LBMC* and CBC. The design measures would maximize structural stability in the event of an earthquake. Thus, upon implementation of Mitigation Measure GEO-1, impacts would be less than significant.

Mitigation Measures:

GEO-1 Prior to the initiation of construction, the project applicant shall prepare a site-specific geotechnical/soils report which addresses structural and geotechnical conditions at the project site that shall be subject to review and approval by the City of Long Beach City Engineer. The geotechnical report shall address soil stability, including liquefaction, and shall address potential impacts during earthquakes. Additionally, the City of Long Beach City Engineer shall ensure that all improvements conform to existing building requirements of the California Building Code (CBC) in order to minimize the potential for damage and major injury during a seismic event. The geotechnical/soils report shall include specific design measures, which are based on the determination of Site Classification and Seismic Design Categories, specific to the project site. Moreover, design and construction of the proposed project shall comply with existing City standards, including Chapter 18.68 (Earthquake Hazard Regulations) of Title 18 (Buildings and Construction), of the Long Beach Municipal Code (*LBMC*).

3) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact With Mitigation Incorporated. Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Liquefaction is characterized by a loss of shear strength in the affected soil layers, thereby causing the soils to behave as a viscous liquid. Susceptibility to liquefaction is based on geologic and geotechnical data. River channels and floodplains are considered most susceptible to liquefaction, while alluvial fans have a lower susceptibility. Depth to groundwater is another important element in the susceptibility to liquefaction. Groundwater shallower than 30 feet results in high to very high susceptibility to liquefaction, while deeper water results in low and very low susceptibility.

According to Figure 7, *Liquefaction Potential Area*, of the Seismic Safety Element of the *General Plan*, the project site is located within a minimal liquefaction potential area. Notwithstanding, the State Division of Mines and Geology has designated all areas within the City within a liquefaction hazard zone, which requires geotechnical reports for construction projects to mitigate the potential undermining of structural integrity during earthquakes. The project would be required to comply with Mitigation Measure GEO-1. As stated above, this measure would require the applicant to prepare a site-specific geotechnical report which addresses geotechnical conditions at the project site and mitigation measures that comply with the *LBMC* and CBC. The design measures are intended to maximize structural stability in the event of liquefaction hazards. Adherence to these existing building requirements and Mitigation Measure GEO-1 would minimize risks related to liquefaction to a less than significant level.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

4) Landslides?

Less Than Significant Impact. Landslides are a geologic hazard, with some moving slowly and causing damage gradually, and others moving rapidly and causing unexpected damage. Gravity is the force driving landslide movement. Factors that commonly allow the force of gravity to overcome the resistance of earth material to landslide movement include saturation by water, steepening of slopes by erosion or construction, alternate freezing or thawing, and seismic shaking.

The project site and surrounding area are relatively flat, making the possibility for landslides extremely remote. Additionally, according to the *General Plan*, Long Beach slope stability is not a major problem as slopes generally are neither high nor steep. Consequently, there is a low potential for landslides to occur on or near the project site. Therefore, there would be a less than significant impact associated with the exposure of people or structures to potential substantial adverse effects involving landslides.

Mitigation Measures: No mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The primary concern in regards to soil erosion or loss of topsoil would be during the construction phase of the project. Grading and earthwork activities associated with project construction activities would expose soils to potential short-term erosion by wind and water. All demolition and construction activities for the project would be subject to compliance with the CBC. Further, the project would be subject to compliance with the requirements set forth in the National Pollutant Discharge Elimination System (NPDES) Storm Water General Construction Permit for construction activities; refer to Response 4.9(a). The NPDES Storm Water General Construction Permit requires preparation of a Storm Water Pollution Prevention Plan (SWPPP), which would identify specific erosion and sediment control Best Management Practices (BMPs) that would be implemented to protect storm water runoff during construction activities. Compliance with the CBC and NPDES requirements would minimize effects from erosion and ensure consistency with the RWQCB Water Quality Control Plan. Following compliance with *LBMC*, the CBC, and NPDES requirements, project implementation would result in a less than significant impact regarding soil erosion.

Mitigation Measures: No mitigation is required.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact With Mitigation Incorporated. The proposed project site is located within a seismically-active area. As stated within Response 4.6(a)(3), impacts related to liquefaction would be mitigated to a

less than significant level with compliance with the CBC and Mitigation Measure GEO-1 and as demonstrated in Response 4.6(a)(4), the project site would not be subject to earthquake-induced landslides.

As stated above, according to the Public Safety Element of the *General Plan*, in the City of Long Beach slope stability is not a major problem as slopes generally are neither high nor steep. The project would be required to comply with Mitigation Measure GEO-1 and all new structures would conform to existing *LBMC* Earthquake Hazard Regulations (Chapter 18.68) and CBC requirements in order to minimize the potential for hazards due to unstable soils. With compliance with the CBC and Mitigation Measure GEO-1, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact With Mitigation Incorporated. Expansive soils are defined as soils possessing clay particles that react to moisture changes by shrinking (when dry) or swelling (when wet). According to the Figure 3, *Soil Profiles*, of the Seismic Safety Element of the *General Plan*, the project site is underlain by granular non-marine terrace deposits overlaying Pleistocene granular marine sediments at shallow depths. The stiff to hard soil is unlikely to be subject to settlement and/or instability. Additionally, the proposed project would be subject to Mitigation Measure GEO-1, which would require compliance with the *General Plan*, *LBMC*, and CBC to minimize the potential for hazards related to expansive soil. With implementation of Mitigation Measure GEO-1, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. No septic tanks or alternative wastewater disposal systems are present or would be constructed as part of the project. No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

4.7 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Global Climate Change

California is a substantial contributor of global greenhouse gases (GHGs), emitting over 400 million tons of carbon dioxide (CO_2) per year.[1] Climate studies indicate that California is likely to see an increase of three to four degrees Fahrenheit (ºF) over the next century. Methane (CH_4) is also an important GHG that potentially contributes to global climate change. GHGs are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission.

Regulations and Significance Criteria

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400 to 450 ppm, carbon dioxide equivalent (CO_2eq)[2] concentration, is required to keep global mean warming below 2 degrees Celsius (ºC), which in turn is assumed to be necessary to avoid dangerous climate change.

Executive Order S-3-05 was issued in June 2005, which established the following GHG emission reduction targets:

- 2010: Reduce GHG emissions to 2000 levels;
- 2020: Reduce GHG emissions to 1990 levels; and
- 2050: Reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill (AB) 32 requires that the California Air Resources Board (CARB) determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB has approved a 2020 emissions limit of 427 million metric tons (MMT) of CO_2eq.

Executive Order (EO) B-30-15, which was issued in April 2015, requires statewide GHG emissions to be reduced 40 percent below 1990 levels by 2030. Senate Bill 32 (SB 32), signed into law in September 2016, codifies the 2030 GHG reduction target in EO B-30-15. The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. GHG emissions from the proposed project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change.

[1] California Energy Commission, *California Greenhouse Gas Inventory for 2000-2015*, June 6, 2017. https://www.arb.ca.gov/cc/inventory/data/data.htm, accessed October 25, 2017.

[2] Carbon Dioxide Equivalent (CO_2eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

In June 2008, the California Governor's Office of Planning and Research (OPR) published a Technical Advisory, which provides informal guidance for public agencies as they address the issue of climate change in CEQA documents.[3] This is assessed by determining whether a proposed project is consistent with or obstructs the 39 Recommended Actions identified by CARB in its Climate Change Scoping Plan which includes nine Early Action Measures (qualitative approach). The Attorney General's Mitigation Measures identify areas were GHG emissions reductions can be achieved in order to achieve the goals of AB 32. As set forth in the OPR Technical Advisory and in the proposed amendments to the *CEQA Guidelines* Section 15064.4, this analysis examines whether the project's GHG emissions are significant based on a qualitative and performance based standard (*CEQA Guidelines* Section 15064.4(a)(1) and (2)).

SCAQMD Thresholds

On December 5, 2008, the South Coast Air Quality Management District (SCAQMD) adopted GHG significance thresholds for Stationary Sources, Rules, and Plans where the SCAQMD is lead agency. The threshold uses a tiered approach. A proposed project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from Senate Bill (SB) 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For industrial stationary source projects, the SCAQMD adopted a screening threshold of 10,000 $MTCO_2eq$ per year ($MTCO_2eq/yr$). This threshold was selected to capture 90 percent of the GHG emissions from these types of projects where the combustion of natural gas is the primary source of GHG emissions. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 $MTCO_2eq/yr$. SCAQMD concluded that projects with emissions less than the screening thresholds would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual (BAU) emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third Option. Under the Tier 4 third option, the project would be excluded if it was below an efficiency-based threshold of 4.8 $MTCO_2eq$ per service population (SP) per year or 3.0 $MTCO_2eq$ per SP for post-2020 projects.[4] Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

While not adopted by the SCAQMD Board, the guidance document prepared for the stationary source threshold also suggested the same tiered approach for residential and commercial projects with a 3,000 $MTCO_2eq/yr$ screening threshold. However, at the time of adoption of the industrial stationary source threshold, the SCAQMD felt additional analysis was required along with coordination with CARB's GHG significance threshold development efforts.

At the November 2009 meeting of the SCAQMD GHG working group, SCAQMD staff presented two options for screening thresholds for residential and commercial projects. The first option would have different thresholds for specific land uses. The proposed threshold for residential projects is 3,500 $MTCO_2eq/yr$, the commercial threshold is 1,400 $MTCO_2eq/yr$, and the mixed-use threshold is 3,000 $MTCO_2eq/yr$. The second option would apply the 3,000 $MTCO_2eq/yr$ screening threshold for all commercial/residential projects. Lead agencies would be able to select either option. These thresholds are based on capturing 90 percent of the emissions from projects and requiring them to comply with the higher tiers of the threshold (i.e., performance requirements or GHG reductions outside of the project) to not result in a significant impact.

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[3] Governor's Office of Planning and Research, *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, 2008.

[4] The project-level efficiency-based threshold of 4.8 $MTCO_2eq$ per SP per year is relative to the 2020 target date. The SCAQMD has also proposed efficiency-based thresholds relative to the 2035 target date to be consistent with the GHG reduction target date of SB 375. GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. Applying this 40 percent reduction to the 2020 targets results in an efficiency threshold for plans of 4.1 $MTCO_2eq$ per SP per year and an efficiency threshold at the project level of 3.0 $MTCO_2eq/year$.

SCAQMD staff also presented updates for compliance options for Tier 4 of the significance thresholds. The first option would be a reduction of 23.9 percent in GHG emissions over the base case. This percentage reduction represents the land use sector portion of the CARB's *Climate Change Scoping Plan's* overall reduction of 28 percent. This target would be updated as the AB 32 *Climate Change Scoping Plan* is revised. The base case scenario for this reduction still needs to be defined. Residual emissions would need to be less than 25,000 $MTCO_2eq/yr$ to comply with the option. Staff proposed efficiency targets for the third option of 4.6 $MTCO_2eq/yr$ per service population (population plus employment) for project level analysis and 6.6 $MTCO_2eq/yr$ for plan level analyses. For project level analyses, residual emissions would need to be less than 25,000 $MTCO_2eq/yr$ to comply with this option.

At the most recent meeting of the SCAQMD GHG working group, SCAQMD staff recommended extending the 10,000 $MTCO_2eq/yr$ industrial project threshold for use by all lead agencies. The two options for land-use thresholds were reiterated with a recommendation that lead agencies use the second, 3,000 $MTCO_2eq/yr$ threshold for all non-industrial development projects. Staff indicated that they would not be recommending a specific approach to address the first option of Tier 4, Percent Emissions Reduction Target. If lead agencies enquire about using this approach, staff will reference the approach recommended by the San Joaquin Valley Air Pollution Control District and describe the challenges to using this approach. For the third option of Tier 4, SCAQMD staff re-calculated the recommended Tier 4 efficiency targets for project level analyses to 4.8 $MTCO_2eq/yr$ in 2020 and 3.0 $MTCO_2eq/yr$ in 2035. The recommended plan level analysis efficiency target remains 6.6 $MTCO_2eq/yr$ for 2020, but was lowered to 4.1 $MTCO_2eq/yr$ for 2035. SCAQMD staff also stated that they are no longer proposing to include a 25,000 $MTCO_2eq/yr$ maximum emissions requirement for compliance with Tier 4. Staff indicated that they hoped to bring the proposed GHG significance thresholds to the board for their December 2010 meeting; however, this did not occur.

For the proposed project, the 10,000 $MTCO_2eq$ per year industrial screening threshold is used as the significance threshold, in addition to the qualitative thresholds of significance set forth below from Section VII of Appendix G to the *CEQA Guidelines*.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact.

Project-Related Sources of Greenhouse Gases

Project-related GHG emissions typically include emission from construction and operational activities. Construction of the project would result in direct emissions of CO_2, N_2O, and CH_4 from the operation of construction equipment. Transportation of materials and construction workers to and from the project site would also result in GHG emissions. Construction activities would be short-term in duration and would cease upon project completion. Operation of the proposed project includes office, manufacturing, and light industrial uses which result in GHG emissions from mobile and operational sources. Mobile sources including vehicle and heavy truck trips to and from the project site would result primarily in emissions of CO_2 with minor emissions of CH_4 and N_2O. Electricity usage by the project and indirect usage of electricity for water and wastewater conveyance would result primarily in CO_2 emissions. Disposal of solid waste would result in emissions of methane from the decomposition of waste at landfills coupled with CO_2 emission from the handling and transport of solid waste. These sources combine to define the long-term GHG emissions for the build-out of the proposed project.

Direct Project-Related Sources of Greenhouse Gases

- *Construction Emissions*. Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions.[5] As shown in Table 4.7-1, *Greenhouse Gas Emissions*, the proposed project would result in 703.45 $MTCO_2eq/yr$ (amortized over 30 years), which represents a total of 3,108.84 $MTCO_2eq$ from construction activities.

[5] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (SCAQMD). SCAQMD, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009.

Table 4.7-1
Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total Metric Tons of CO_2eq
	Metric Tons/yr[1]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	
Direct Emissions						
• Construction • (total of 703.45 $MTCO_2eq$ amortized over 30 years)	23.34	0.00	0.00	0.00	0.00	23.45
• Area Source	0.03	0.00	0.00	0.00	0.00	0.03
• Mobile Source (Passenger Cars)	1,356.89	0.07	1.77	0.00	0.00	1,358.66
• Mobile Source (Trucks)	1,723.44	0.13	3.26	0.00	0.00	1,726.70
Total Direct Emissions[3]	***3,103.70***	***0.20***	***5.03***	***0.00***	***0.00***	***3,108.84***
Indirect Emissions						
• Building Energy	2,335.12	0.10	2.40	0.02	6.02	2,343.53
• Off-road (Electric Warehouse Equipment)	107.07	0.03	0.85	0.00	0.00	107.92
• Solid Waste Generation	81.58	4.82	120.54	0.00	0.00	202.12
• Water Demand	441.56	3.24	80.97	0.08	23.72	546.24
Total Indirect Emissions[3]	***2,965.33***	***8.19***	***204.76***	***0.10***	***29.74***	***3,199.81***
Total Project-Related Emissions[3]	***6,308 $MTCO_2eq/yr$***					
GHG Emissions Threshold	***10,000.00 $MTCO_2eq/yr$***[5]					
GHG Emissions Exceed Threshold?	***No***					

Notes:
1. Emissions calculated using CalEEMod.
2. CO_2 Equivalent values calculated using the EPA Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator, accessed October 2017.
3. Totals may be slightly off due to rounding.

Refer to Appendix A, *Greenhouse Gas Emissions Data*, for detailed model input/output data.

- *Area Source*. Area source emissions occur from hearths, architectural coatings, landscaping equipment, and consumer products. The project proposes a hotel development and would not include hearths. Landscaping and consumer products would be limited. Additionally, the primary emissions from architectural coatings are volatile organic compounds, which are relatively insignificant as direct GHG emissions. CalEEMod assumes an architectural coating reapplication rate of 10 percent of the surface area each year, which would further reduce the operational GHG emissions from architectural coatings. The project would directly result in 0.03 $MTCO_2eq/yr$ from area source emissions.

- *Mobile Source*. CalEEMod relies upon trip generation rates from the ITE Trip Generation Manual, 9th Edition, and project specific land use data to calculate mobile source emissions. The project would directly result in 1,358.66 $MTCO_2eq/yr$ of mobile source-generated GHG emissions from passenger cars and 1,726.70 $MTCO_2eq/yr$ from trucks; refer to Table 4.7-1.

Indirect Project-Related Source of Greenhouse Gases

- *Energy Consumption*. Energy consumption were calculated using CalEEMod GHG energy emissions factors and project energy consumption. Electricity would be provided to the project site via Southern California Edison (SCE). The proposed project would indirectly result in 2,343.53 $MTCO_2eq$/year due to energy consumption; refer to Table 4.7-1.

- *Water Demand*. The project operations would result in a demand of approximately 79.1 million gallons of water per year. Emissions from indirect energy impacts due to water supply would result in 543.24 $MTCO_2eq$/year; refer to Table 4.7-1.

- *Solid Waste*. Solid waste associated with operations of the proposed project would result in 202.12 $MTCO_2eq$/year; refer to Table 4.7-1.

Total Project-Related Sources of Greenhouse Gases

As shown in Table 4.7-1, the total amount of project-related emissions from direct and indirect sources combined would total 6,608 $MTCO_2eq$/yr, which is below the 10,000 $MTCO_2eq$/yr threshold. Therefore, the proposed project would result in a less than significant impact with regard to GHG emissions.

Mitigation Measures: No mitigation is required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The City adopted its Sustainable City Action Plan (CAP) in February 2010 to guide operational, policy, and financial decisions within the City. While the CAP provides a sustainable framework for future developments within the City, the goals outlined in the City's CAP are primarily municipal in nature, and not project-specific. Therefore, the implementation of the proposed project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

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4.8 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		✓		
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			✓	
e. 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 result in a safety hazard for people residing or working in the project area?				✓
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		✓		
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓

This section is based on the following hazardous materials documentation:

- Hazard Management Consulting, *Asbestos Survey Report and Inspection for Pre-Demolition Hazardous Materials* (*Asbestos Survey*), dated January 4, 2017;
- Allstate Services LLC, *Lead-Based Paint Testing Report* (*LBP Testing*), dated January 3, 2017;
- Hazard Management Consulting, *Phase I Environmental Site Assessment* (*Phase I ESA*), dated January 30, 2017; and
- Hazard Management Consulting, *Results of a Subsurface Investigation* (*Phase II SI*), dated February 9, 2017.

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. The project proposes the construction of light industrial/manufacturing buildings. Although the end user of the buildings are not known at this time, long-term operation of the project may involve the routine transport, use, or disposal of hazardous materials. The types and quantities of hazardous substances utilized by the various types of potential future users at the project site would vary and, as a result, the nature of potential hazards would vary. Generally, the exposure of persons to hazardous materials could occur in the following manners: 1) improper handling or use of hazardous materials or hazardous wastes during construction or operation of future developments, particularly by untrained personnel; 2) an accident during transport; 3) environmentally unsound disposal methods; or 4) fire, explosion, or other emergencies. Therefore, the project could result in impacts related to the routine transport, use, and/or disposal of hazardous materials.

The proposed project would be subject to compliance with existing regulations, standards, and guidelines established by the U.S. Environmental Protection Agency (EPA), State, County of Los Angeles, and the City of Long Beach related to the storage, use, and disposal of hazardous materials. The project is subject to compliance with the existing hazardous materials regulations, which are codified in California Code of Regulations (CCR) Titles 8, 22, and 26, and their enabling legislations set forth in Health and Safety Code Chapter 6.95 as well as CCR Title 49. Both the Federal and State governments require any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the County as a manager of regulated substances and prepare a Risk Management Plan. The Risk Management Plan must contain an off-site consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses would be required to submit their plans to the Certified Unified Program Agency (CUPA) (City of Long Beach, Department of Environmental Health [DEH]), which would make the plans available to emergency response personnel. The Risk Management Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location.

While the risk of exposure to hazardous materials cannot be eliminated, best management practices can be implemented to reduce risk to acceptable levels. Adherence to existing regulations would ensure compliance with safety standards related to the use and storage of hazardous materials, and the safety procedures mandated by applicable Federal, State, and local laws and regulations, which would ensure that risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes associated with implementation of the proposed project would be less than significant.

Mitigation Measures: No mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact With Mitigation Incorporated.

Short-Term Impacts

One of the means through which human exposure to hazardous substance could occur is through accidental release. Incidents that result in an accidental release of hazardous substance into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. If not cleaned up immediately and completely, the hazardous substances can migrate into the soil or enter a local stream or channel causing contamination of soil and water. Human exposure of contaminated soil, soil gas, or water can have potential health effects on a variety of factors, including the nature of the contaminant and the degree of exposure.

Construction Equipment

During project construction, there is a possibility of accidental release of hazardous substances such as petroleum-based fuels or hydraulic fluid used for construction equipment. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials utilized during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and Federal law. With compliance with existing laws and regulations, impacts in this regard would be less than significant.

Demolition of the Existing USPS Structures

Due to the age of existing on-site buildings (constructed prior to 1978), there is the potential for asbestos-containing materials (ACMs) and lead-based paint (LBP), as well as other potential hazardous materials to be present in association with the on-site building materials. Demolition of these structures could expose construction personnel and the public to ACMs and/or LBPs. An *Asbestos Survey* was prepared for the project site. The objectives of the survey were to assess the likelihood that asbestos is present in concentrations greater than one percent in accessible construction materials; and, to assess whether fluorescent light ballasts and exit signs contained hazardous materials. Based on the findings made in the *Asbestos Survey*, ACMs were reported above regulatory thresholds for asphalt plank flooring in the mail sorting area and floor tile in the office space at the east side of the mail processing building. Exit signs did not appear to be associated with hazardous materials. However, existing lighting ballasts were identified to potentially include polychlorinated biphenyls (PCBs). According to the *LBP Testing* conducted for the project site, LBPs were found at or above regulatory thresholds at bumper posts and curbs near the vehicle maintenance facility and a bumper post and corner guard at the main processing building.

Federal and State regulations govern the renovation and demolition of structures where ACMs and LBPs are present. All demolition that could result in the release of ACMs or LBPs must be conducted according to Federal and State standards. Prior to demolition activities, the construction contractor would be required to retain a licensed abatement contractor to perform asbestos-related activities (Mitigation Measure HAZ-1). The abatement of asbestos must be completed by the project applicant, as overseen by the licensed abatement contractor, prior to any activities that would disturb ACMs, including existing flooring materials identified in the *Asbestos Survey*. If additional materials are discovered during demolition of the building(s) and laboratory analysis of samples of those materials was not performed, samples would be required to be collected and analyzed prior to removal or disturbance of the materials. Further, prior to demolition activities, older florescent light fixture ballasts that are not labeled as “no PCBs” would be required to be removed by a licensed contractor with proper certifications and training for handling hazardous wastes (HAZ-2). Last, prior to demolition and disposal of on-site bumper posts, curbs, and corner guards, the construction contractor would be required to retain a qualified Lead Specialist to oversee proper abatement activities (HAZ-3). With implementation of Mitigation Measures HAZ-1 through HAZ-3, impacts associated with the potential release of hazardous materials into the environment through reasonably foreseeable upset and accident conditions during demolition activities would ensure less than significant impacts would result.

Grading Activities

Construction activities could also result in accidental conditions involving existing on-site contamination. The following analysis considers current and past uses of the project site, which may have impacted soil, soil gas, and/or groundwater underlying the project site.

Past On-Site Oil Field Sumps

According to the *Phase I ESA*, the project site was historically undeveloped land in the early 1900s and developed with a series of oil field sumps and aboveground storage tanks (ASTs) by the mid-1920s, which remained on-site through

the 1960s. At this time, several ASTs were also present at the adjacent Shell Bulk Terminal to the west of the project site (similar to the existing conditions). Numerous oil wells and oil field activities to the south and southwest of the project site were also present. The presence of historical oil field sumps and an AST farm present an environmental concern with regard to potential on-site soil contamination.

In order to confirm whether contaminated soils are present as a result of past oil field sumps and the AST farm, soil sampling was conducted as part of the *Phase II Subsurface Investigation*. Borings were drilled within the mid-portion of the former oil sump to approximately 70 to 90 feet below ground surface (bgs) to assess the vertical extent. Borings were step-out borings advanced to 40 feet bgs to define the lateral extent of potential contamination. One boring was also drilled in the area of the former AST farm. Soil samples were collected at five-foot depth intervals starting at approximately five feet bgs and continuing to the bottom of the boring. Select soil samples were analyzed for total petroleum hydrocarbons (TPH) carbon chain (TPHcc) and volatile organic compounds (VOCs). Given that heavy metals are commonly found in areas of former oil field activities, select five-foot soil samples were also analyzed for Title 22 metals.

VOCs were not detected in the analyzed soil samples collected from borings within the former oil sump and AST farm, with the exception of one five-foot sample collected at the western end of the former oil sump. This sample was reported to contain 0.0234 milligrams per kilogram (mg/kg) of xylenes, which is well below regulatory screening levels. During drilling of the borings within the former oil sump, petroleum odor and staining was observed generally throughout the shallow soil between 1 and 15 feet bgs. Laboratory results of samples collected within this zone indicates no detectable to low concentrations of diesel and oil range hydrocarbons at concentrations that were at or below regulatory screening levels (up to 1,000 mg/kg of diesel range hydrocarbons in the carbon range C_{13}-C_{22} [TPHd] and 1,600 mg/kg of heavy oils in the carbon chain C_{23}-C_{35} [TPHo]). Although deeper soil samples were also noted to contain a petroleum odor, analytical results indicated lower concentrations of TPHd and TPHo (less than 20 mg/kg) in samples collected between 20 to 40 feet bgs, and no detections in deeper soil samples collected at 50 to 80 feet bgs. Elevated concentrations of metals were not detected in the analyzed samples, with the exception of one five-foot sample. This sample was reported to contain 30 mg/kg of arsenic, which slightly exceeded the Department of Toxic Substances Control (DTSC) screening level of 12 mg/kg. To verify that the elevated arsenic was limited in extent, the 10-foot sample was also analyzed. Arsenic was not detected in the 10-foot sample. Based on these results, the slightly elevated arsenic detected in the 5-foot sample is limited in extent and is not considered an environmental or human health concern.

According to the results of the *Phase II SI*, the shallow soil in the area of the former oil sump and AST farm are impacted with heavy oil at concentrations that are below regulatory screening levels and would not pose a risk to groundwater or human health based on industrial/commercial land use criteria. Thus, impacts in this regard are less than significant.

Past Presence of Underground Storage Tanks and Associated Equipment

After the oil field sumps were removed, the project site was used for outdoor storage activities along the southern portion of the site and a golf center along the northern portion of the site. By the late 1970s, the project site was developed with the USPS facility, which was further expanded in the early 2000s. The USPS operations include a vehicle maintenance facility. As part of these operations, underground storage tanks (USTs) were present and are associated with past releases. Based on the *Phase I ESA*, these USTs were removed in the late 1980s through 2016. There have been four separate environmental investigations conducted at the project site related to removal and replacement of USTs and related equipment, all in the area of the vehicle maintenance facility.

<u>1987 Hydraulic Line Release</u>. The vehicle maintenance facility operated a series of hydraulic lifts, which were fed by a 500-gallon hydraulic oil tank. There were numerous reports of leaks in the piping that connected the tank to the lifts and in 1987, the piping was removed. A report was made to the DEH who oversaw an investigation to determine the extent of the release. As part of this investigation, it was estimated that 600 gallons of hydraulic fluid was released from the leaking product lines. Five borings were advanced and soil samples collected for chemical analysis. The impacted soil was later excavated and removed for off-site disposal under the direction and oversight of the DEH.

Excavation was advanced to an underlying clay later that served as a barrier to further movement of the material (although no confirmation samples were collected at this time). Manifest records included in a report describing the soil excavation indicated that approximately 25 cubic yards of impacted soil was removed from the project site. Upon completion of excavation and removal activities, the DEH provided a No Further Action (NFA) letter dated May 13, 1987.

1991 UST Removal. In June of 1991, two 2,000-gallon (new and used oil) and one 10,000-gallon (diesel fuel) USTs were removed from the project site under the oversight and review of the DEH. Soil samples collected from the soil under the USTs reported non-detect concentrations of hydrocarbons and VOCs. The DEH provided a NFA letter on July 3, 1991. In July of 1991, an additional 20,000-gallon UST used to store gasoline was removed from the project site and no evidence of a release was noted at this time.

2005 UST Removal. In 2005, Lowney & Associates oversaw the removal of one 20,000-gallon gasoline UST and two 2,500-gallon (new and waste oil) USTs. There was no evidence of staining or odors noted during removal. Soil samples collected from beneath the USTs reported concentrations of petroleum hydrocarbons ranging from non-detect to 181 mg/kg and VOCs were either non-detect or at trace concentrations. Approximately 265 tons of impacted soil was removed from the project site for off-site disposal. The DEH granted a NFA letter on May 20, 2005.

2016 UST Removal. In July of 2016, a single 10,000-gallon diesel fuel UST was removed under the observation of Tait & Associates. Generally, low concentrations of hydrocarbons were reported in soil samples from beneath the former UST up to 350 mg/kg with one sample from below the former dispenser reported to contain 16,000 mg/kg. A commonly used cleanup criteria for diesel type hydrocarbons is 1,000 mg/kg. The sample from beneath the dispenser was above this criteria. Notwithstanding this one exceedance, the DEH issued a NFA letter on September 16, 2016.

In conclusion, removal of USTs included proper closures with the DEH, in which NFA letters were issued. However, in order to confirm whether contaminated soils are present as a result of these past USTs and associated equipment and past reported releases, soil sampling was conducted as part of the *Phase II SI*.

Four borings were advanced to approximately 20 feet bgs in the area of the former USTs and associated fuel dispenser island to determine whether a significant release had occurred from these features. Samples were collected at five-foot depth intervals starting at five feet bgs and continuing to the bottom of the boring. Samples estimated to be beneath the features of concern were analyzed for TPHcc and VOCs. Given that a waste oil release may result in elevated metal concentrations in the soil, the sample collected from one boring (located near the former waste oil UST) was also analyzed for metals. VOCs were not detected in the analyzed soil samples. Metal results were within normal background concentrations and below the human health risk criteria. The samples collected near the former USTs were reported to contain no detectable to low concentrations of TPHd and TPHo at levels below regulatory screening levels. Based on these results, a significant release from the former USTs and associated fuel dispenser island is unlikely to have occurred. It is unlikely that petroleum hydrocarbons and VOCs reported at the project site would pose a risk to groundwater or human health based on industrial/commercial land use criteria. Thus, impacts in this regard would be less than significant.

Use/Storage of Chemicals at the Vehicle Maintenance Facility

The *Phase I ESA* also acknowledged that the vehicle maintenance facility uses/stores chemicals. ASTs are present at the vehicle maintenance facility. Chemical use and storage was noted to include good housekeeping and only minor staining was noted. The *Phase I ESA* determined that these existing activities at the project site have not resulted in an environmental concern to existing on-site soils. Notwithstanding, the *Phase II SI* conducted soil sampling near the existing ASTs in order to verify that a significant release has not occurred. Borings were advanced to approximately 20 feet bgs in the area of the existing ASTs. Samples were analyzed for TPHcc and VOCs. VOCs were not detected in the analyzed soil samples. The samples collected were reported to contain no detectable to low concentrations of TPHd and TPHo at levels below regulatory screening levels. Based on these results, a significant release from the existing ASTs is unlikely to have occurred. It is unlikely that petroleum hydrocarbons and VOCs reported at the project

site would pose a risk to groundwater or human health based on industrial/commercial land use criteria. Thus, impacts in this regard would be less than significant.

The vehicle maintenance facility operations also include the use of a clarifier to accept industrial wastewater from the various vehicle maintenance facility operations before discharge to the sewer system. Given the types of chemicals that could be discharged to the clarifier including oil, grease, automotive solvents, and miscellaneous road grime, brake dust and so forth, the *Phase I ESA* determined that the presence of the clarifier presents an environmental concern to soils at the project site. In order to confirm whether contaminated soils are present as a result of the on-site clarifier, soil sampling was conducted as part of the *Phase II SI*.

Borings were advanced near the influent and effluent piping associated with the existing clarifier to determine whether a release has occurred from these features. The clarifier was measured to be approximately 8 feet deep. The 10-foot samples from the borings were collected beneath the bottom of the clarifier and analyzed for TPHcc and VOCs. One of the samples collected from the borings was also analyzed for metals. TPHcc and VOCs were not detected, and metal results were within normal background concentrations. Based on these results a release does not appear to have occurred from the clarifier. Thus, impacts in this regard are less than significant.

Borings were advanced near the hydraulic hoists to determine whether a release has occurred. Hydraulic hoists are typically 8 feet deep. The 5-, 10-, and 15-foot samples from borings collected adjacent to the hydraulic hoists were analyzed for TPHcc and VOCs. VOCs were not reported in the analyzed soil samples with the exception of trace concentrations of 1,2,4-trimehtylbenzene, 1,3,5-trimethylbenzene, and naphthalene in the 5-foot sample collected. These detected compounds are constituents that are found in petroleum hydrocarbons such as hydraulic oil. These VOC concentrations are below the DTSC Human and Ecological Risk Office (HERO), Note 3, soil screening levels for industrial/commercial land use (DTSC-SLi) and EPA-Region 9 Regional Screening Levels for industrial/commercial land use (EPA-RSLi) as well as the Los Angeles Regional Water Quality Control Board (RWQCB) guidelines. Field observations indicated petroleum odor and staining in the 10-foot sample collected. This sample was reported to contain 1,300 mg/kg of TPHd and 6,800 mg/kg to TPHo indicating a possible release of hydraulic oil. Although the reported TPHd concentration slightly exceeded the 1,000 mg/kg RWQCB guideline, the 15-foot sample from this boring and 10-foot stepout samples collected indicated much lower TPHd concentrations (less than 35 mg/kg). Based on these results, the area of impacted soil in the northeastern area with hydraulic hoists is very limited in extent and would not be an environmental or human health concern. Thus, impacts in this regard are less than significant.

Known Groundwater Contamination from Shell Terminal Facility

In addition to on-site current and past activities, one off-site property has reported releases that have impacted groundwater, which has migrated onto the project site. According to the *Phase I ESA*, the Shell Terminal Facility is located to the west of the project site, across Redondo Avenue. This facility dates back to the 1920s and various releases of petroleum products have been reported from a variety of separate features at this facility. These reported releases have affected soil, soil gas, and groundwater. The plume of impacted groundwater has migrated to the northeast and has impacted groundwater beneath the project site. Five monitoring wells have been installed on the project site to monitor the nature and movement of this plume over time. Groundwater beneath the project site is estimated at approximately 88 feet bgs. Remedial activities have included soil removal, soil vapor extraction, free product removal from the water table, and groundwater pump and treatment. As part of Shell's overall efforts, a vapor intrusion risk assessment was conducted to evaluate whether the release of petroleum products poses a carcinogenic risk from vapor intrusion into existing overlying structures. Three separate office areas that overly the plume were reviewed and no risks above acceptable levels were found to be present. It should be noted that while the project site was not specifically evaluated, the concentrations of petroleum products detected in groundwater at the project site were substantially lower than the locations where the assessment was conducted. As such, this release would not be considered to pose a vapor intrusion risk to the project site. Notwithstanding, based on the known reported contamination present in groundwater, the *Phase I ESA* determined that this adjacent facility presents an environmental concern to groundwater and soil gas contamination at the project site.

As groundwater is at approximately 88 feet bgs, proposed construction activities are not anticipated to encounter groundwater. Further, as discussed above, proposed grading would not involve substantial risk involving soil gas contamination. Implementation of the proposed project may require the relocation of existing on-site monitoring wells. The project would be required to comply with Mitigation Measure HAZ-4, which would require the project applicant to submit documentation as proof, to the City of Long Beach City Engineer, that the relocation of any monitoring wells have been conducted in compliance with DEH standards and regulations. With implementation of the recommended Mitigation Measures, impacts in this regard would be reduced to less than significant levels.

Conclusion

Based on the *Phase II SI*, current and past uses of the project site do not present a human health risk or risk to groundwater. Further, contaminated groundwater and soil gas at the project site do not present a vapor intrusion concern. The DEH issued a NFA letter for the proposed project on February 24, 2017 based on the *Phase II SI*.[1] However, known limited soil contamination is present in on-site soils. Should these soils be disposed of at an off-site location, the construction contractor would be required to verify that all exported soils are not contaminated with hazardous materials above regulatory thresholds in consultation with a Phase II/Site Characterization Specialist (Mitigation Measure HAZ-5). If export soils are determined to be contaminated above regulatory thresholds, the Phase II/Site Characterization Specialist would recommend proper handling, use, and/or disposal of these soils. With compliance with Mitigation Measure HAZ-5, potential accidental conditions involving contaminated soils would be reduced to less than significant levels.

Long-Term Operational Impacts

Refer to Response 4.8(a), above, for a description of impacts related to existing and proposed operations at the site. Upon adherence to existing regulations related to chemical safety, impacts pertaining to the potential for accidental conditions during project operations would be less than significant. It is acknowledged that, although not anticipated, future buildings could be susceptible to vapor intrusion as a result of the existing contaminated soil gas/ groundwater. The *Phase II SI* conducted a soil gas survey in order to verify vapor intrusion is unlikely.

Select borings beneath the proposed buildings were used to install 5-foot soil vapor monitoring points (SVMPs). Based on the results, trace concentrations of VOCs, below regulatory screening levels, were detected in the soil gas samples. Low concentrations of total petroleum hydrocarbons as gasoline in the C_4-C_{12} carbon range (TPHg) (less than 100 µg/l) were detected in several soil gas samples. Although there are no regulatory screening criteria for TPHg, based on the *Phase II SI*, these detections are typically found at sites with former oil field activities. Regulatory agencies typically use VOC concentrations as the driving force for cleanup requirements. Given that elevated VOCs were not detected in these samples, the reported TPHg concentrations are not considered a concern. Based on the results, the reported TPH and VOC concentrations are unlikely to result in a vapor intrusion concern to the proposed buildings. Impacts in this regard are less than significant.

Due to the historical oil field activities at the project site, the City of Long Beach Department of Building and Safety (LBBS) was contacted to inquire whether possible methane gas studies would be required prior to redevelopment. Based on correspondence with the LBBS conducted during the *Phase II SI*, petroleum hydrocarbon impacted soils associated with oil sumps do not represent a significant methane gas issue (i.e., decomposition is minimal and does not produce significant amounts of methane). Oil production activities, such as oil wells that are drilled into deep geologic formations containing large quantities of methane act as conduits to the surface, and therefore are considered possible methane gas sources. Based on the distance of the oil field activities from the project site and the fact that no oil wells have been drilled on the property, LBBS staff indicated that methane gas studies or mitigation for the proposed project would not be necessary. Based on this information, there is a low likelihood that elevated concentrations of methane gas are present at the project site and impacts in this regard would be less than significant.

[1] City of Long Beach, Department of Health and Human Services, Bureau of Environmental Health, No Further Action Letter for 2300 Redondo Avenue, Long Beach, California 90815, dated February 24, 2017.

Mitigation Measures:

HAZ-1 Prior to demolition activities, the construction contractor shall retain a licensed abatement contractor registered in the State of California and certified in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1403, to perform asbestos-related activities. The abatement of asbestos shall be completed by the project applicant, as overseen by the licensed abatement contractor, prior to any activities that would disturb ACMs, including existing flooring materials identified in the *Asbestos Survey Report and Inspection for Pre-Demolition Hazardous Materials*, dated January 4, 2017. If additional materials are discovered during demolition of the building(s) and laboratory analysis of samples of those materials was not performed, samples shall be collected and analyzed prior to removal or disturbance of the materials. Applicable laws and regulations shall be followed, including those provisions requiring notification, of contractors who may contact the asbestos-containing materials, of the location of these materials. Contractors performing asbestos abatement activities shall provide evidence of abatement activities to the City of Long Beach City Engineer.

HAZ-2 Prior to demolition activities, older florescent light fixture ballasts that are not labeled as "no PCBs" shall be removed by a licensed contractor with proper certifications and training for handling hazardous wastes. Contractors performing removal activities shall provide evidence of removal to the City of Long Beach City Engineer.

HAZ-3 A qualified Lead Specialist shall be retained by the construction contractor for activities involving demolition and disposal of on-site bumper posts, curbs, and corner guards. Proper abatement shall be conducted per the instruction of the Lead Specialist prior to any disturbance of these materials. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring, and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the City of Long Beach City Engineer.

HAZ-4 Prior to issuance of a Certificate of Occupancy, the project applicant shall submit documentation as proof, to the City of Long Beach City Engineer, that the relocation of any monitoring wells have been conducted in compliance with the City of Long Beach, Department of Environmental Health standards and regulations.

HAZ-5 The construction contractor shall verify that all exported soils are not contaminated with hazardous materials above regulatory thresholds in consultation with a Phase II/Site Characterization Specialist. If export soils are determined to be contaminated above regulatory thresholds, the Phase II/Site Characterization Specialist shall recommend proper handling, use, and/or disposal of these soils.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The project site is not located within one-quarter mile of an existing or proposed school (for grades K through 12). It is acknowledged that adult education facilities are located within proximity. However, as no children (under the age of 18) are present at a school facility within one-quarter mile of the project site, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant Impact. Government Code Section 65962.5 requires the DTSC and the State Water Resources Control Board (SWRCB) to compile and update a regulatory site's listing (per the criteria of the Section). The California Department of Health Services is also required to compile and update, as appropriate, a list of all public drinking water wells that contain detectable levels of organic contaminants and that are subject to water analysis pursuant to Section 116395 of the Health and Safety Code. Section 65962.5 requires the local enforcement agency, as designated pursuant to Section 18051 of Title 14 of the CCR, to compile, as appropriate, a list of all solid waste disposal facilities from which there is a known migration of hazardous waste.

According to the *Phase I ESA*, the project site was historically listed on the Cortese database listing (pursuant to Section 65962.5). However, as discussed in Response 4.8(b) above, impacts regarding past releases from former USTs and associated equipment are less than significant. Thus, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

e) 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 result in a safety hazard for people residing or working in the project area?

No Impact. The nearest airport to the project site is the Long Beach Airport, located approximately 0.65 miles north of the project site. Based on the *Airport Land Use Plan*, the project site is located outside of the Airport Influence Area, including the identified Runway Protection Zone (RPZ).[2] Thus, no impact would result in this regard.

Mitigation Measures: No mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There are no private airstrips located within the project area or in the vicinity. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact With Mitigation Incorporated. The proposed project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Project construction activities could result in short-term temporary impacts to street traffic along Redondo Avenue and Burnett Street. While temporary lane closures would be required, travel along surrounding roadways would remain open and would not interfere with emergency access in the site vicinity. In addition, the project would be required to comply with Mitigation Measure HAZ-6, which requires the project applicant to notify the Long Beach Fire Department (LBFD), Long Beach Police Department (LBPD), and City of Long Beach Public Works Department of construction activities that would impede movement (such as lane closures) along Redondo Avenue and Burnett Street. Compliance with Mitigation Measure

[2] Los Angeles County Airport Land Use Commission, *Long Beach Airport, Airport Influence Area Map*, May 13, 2003.

HAZ-6 would allow for uninterrupted emergency access to evacuation routes. Thus, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures:

HAZ-6 At least three business days prior to any lane closure, the construction contractor shall notify the Long Beach Fire Department (LBFD) and Long Beach Police Department (LBPD), along with the City of Long Beach City Engineer, of construction activities that would impede movement (such as lane closures) along Redondo Avenue and Burnett Street, in order to ensure uninterrupted emergency access and maintenance of evacuation routes.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The proposed project site is located within an urbanized area. The project site has been disturbed as a result of the past development and is not identified as a high fire hazard area in the City[3]. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

[3] Cal Fire, *Very High Fire Hazard Severity Zones in LRA*, http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones, dated September 2011, accessed on May 3, 2017.

4.9 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			✓	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			✓	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓	
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			✓	
f. Otherwise substantially degrade water quality?			✓	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✓
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			✓	
j. Inundation by seiche, tsunami, or mudflow?			✓	

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. As part of Section 402 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) has established regulations under the National Pollution Discharge Elimination System (NPDES) program to control direct storm water discharges. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The NPDES program regulates industrial pollutant discharges, which include construction activities. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The City of Long Beach is within the jurisdiction of the Los Angeles RWQCB.

Short-Term Construction

Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP would list Best Management Practices (BMPs) the discharger would use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP would contain: a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.

The project's construction activity would be subject to the State's General Construction Permit, as discussed above, because it involves clearing, grading, and disturbances to the ground such as stockpiling or excavation, and a construction site with soil disturbance greater than one acre. More specifically, as part of the project's compliance with NPDES requirements, the project applicant would be required to prepare a Notice of Intent (NOI) for submittal to the Los Angeles RWQCB providing notification of intent to comply with the General Construction Permit. A copy of the SWPPP would be made available and implemented at the construction site at all times. The SWPPP is required to outline the erosion, sediment, and non-storm water BMPs, in order to minimize the discharge of pollutants at the construction site. These BMPs would include measures to contain runoff from vehicle washing at the construction site, prevent sediment from disturbed areas from entering the storm drain system using structural controls (i.e., sand bags at inlets), and cover and contain stockpiled materials to prevent sediment and pollutant transport. Implementation of the BMPs would ensure runoff and discharges during the project's construction phase would not violate any water quality standards. Compliance with NPDES requirements would reduce short-term construction-related impacts to water quality to a less than significant level.

Long-Term Operations

The project site is currently developed with the USPS facility and associated parking. Project implementation would construct a light industrial/manufacturing facility, including three buildings, associated parking, and circulation improvements. As such, the project is anticipated to result in a similar drainage effects. However, the project would be required to comply with NPDES Phase I Municipal Stormwater Permits issued by the Los Angeles RWQCB for Long Beach, which would improve water quality and possibly reduce discharge for the project site. Thus, impacts in this regard are anticipated to be less than significant.

<u>Los Angeles RWQCB Requirements for Long Beach</u>

Since 1990, operators of municipal separate storm sewer systems are required to develop a storm water management program designed to prevent harmful pollutants from impacting water resources via stormwater runoff. The City of Long Beach owns and/or operates a large municipal separate storm sewer system (MS4) that conveys and ultimately discharges into surface waters under the jurisdiction of the Los Angeles RWQCB. These discharges originate as surface runoff from the various land uses within the City's boundary. Untreated, these discharges contain pollutants with the potential to impair or contribute to the impairment of the beneficial uses in surface waters. Since 1999, the City's monitoring data and analyses in support of Total Maximum Daily Load (TMDL) development have identified pollutants of concern in discharges from the MS4. These pollutants of concern vary by receiving water. They generally

include, but are not limited to, copper, lead, zinc, cadmium, PCBs, PAHs, pyrethroid pesticides, organophosphate pesticides fecal indicator bacteria, and trash.

On September 8, 2016, the Los Angeles RWQCB made effective Order No. R4-2014-0024-A01, which amended the municipal NPDES permit. As prescribed in Order No. R4-2014-0024-A01, *Water Discharge Requirements for Municipal Separate Storm Sewer System Discharges From The City of Long Beach*, the City of Long Beach shall develop and implement procedures to ensure that a discharger fulfills the following for non-storm water discharges to MS4s:[1]

- Notifies the City of Long Beach of the planned discharge in advance, consistent with requirements in Table 7 of Order No. R4-2014-0024-A01 or recommendations pursuant to the applicable BMP manual;
- Obtains any local permits required by the City of Long Beach;
- Provides documentation to the City of Long Beach that it has obtained any other necessary permits of water quality certifications for the discharge;
- Conducts monitoring of the discharge, if required by the City of Long Beach;
- Implements BMPs and/or control measures as specified in Table 7 or in the applicable BMP manual(s) as a condition of the approval to discharge into the MS4; and
- Maintains records of its discharge to the MS4, consistent with requirements in Table 7 or recommendations pursuant to the applicable BMP manual.

In 2001, the City revised its Long Beach Storm Water Management Program (LBSWMP). The LBSWMP is a comprehensive program containing several elements, practices, and activities aimed at reducing or eliminating pollutants in storm water to the maximum extent possible. Furthermore, the City's NPDES and Standard Urban Storm Water Mitigation Plan (SUSMP) regulations contained in Chapter 18.61 of the *LBMC* state that:

A. The Building Official shall prepare, maintain, and update, as deemed necessary and appropriate, the NPDES and SUSMP Regulations Manual and shall include technical information and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the City deems necessary, for implementing the provisions of this chapter.

B. The Building Official shall develop, as deemed necessary and appropriate, in cooperation with other City departments and stakeholders, informational bulletins, training manuals and educational materials to assist in the implementation of this chapter.

The project is anticipated to result in similar wastewater discharge to existing conditions and the project would be required to comply with NPDES Phase I Municipal Stormwater Permits, which would improve water quality and possibly reduce discharge for the project site. Thus, impacts in this regard are anticipated to be less than significant.

Mitigation Measures: No mitigation is required.

[1] Los Angeles Regional Water Quality Control Board, *Order No. R4-2014-0024-A01, NPDES Permit No, CAS004003*, September 8, 2016.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. The project site exists within a completely developed, urbanized area. The project would be constructed on the existing USPS facility site. According to the *Results of a Subsurface Investigation* (*Phase II SI*), prepared by Hazard Management Consulting, dated February 9, 2017, the project site's depth to groundwater is approximately 88 feet below ground surface (bgs). The site does not currently affect groundwater directly (through pumping, wells, or injection), nor would the proposed project include any components that would directly affect groundwater. Additionally, the proposed project would not result in an increase of impervious surfaces from existing site conditions. Thus, project implementation would not deplete groundwater supplies or interfere with groundwater recharge. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. Soil disturbance would temporarily occur during project construction due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, and grading. Disturbed soils would be susceptible to high rates of erosion from wind and rain, resulting in sediment transport via storm water runoff from the project site.

The project would be subject to compliance with the requirements set forth in the NPDES Storm Water General Construction Permit for construction activities; refer to Response 4.9(a). Compliance with the NPDES, including preparation of a SWPPP would reduce the volume of sediment-laden runoff discharging from the site. The implementation of BMPs such as storm drain inlet protection and fiber rolls would reduce the potential for sediment and storm water runoff containing pollutants from entering receiving waters. Therefore, project implementation would not substantially alter the existing drainage pattern of the site during the construction process such that substantial erosion or siltation would occur.

The long-term operation of the proposed light industrial/manufacturing facility would not have the potential to result in substantial erosion or siltation on- or off-site. Further, project implementation is anticipated to have similar drainage patterns to existing on-site conditions and the project would be required to comply with NPDES Phase I Municipal Stormwater Permits. Thus, impacts in this regard are anticipated to be less than significant.

Mitigation Measures: No mitigation is required.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. Refer to Response 4.9(c), above. The project site is generally flat and is located within an urbanized area. The project site is not located within areas of potential flooding according to the Public Safety Element, Figure 11, *Areas of Potential Flooding*, of the *General Plan*. The project would construct a light industrial/manufacturing facility similar to the existing on-site use, which would not require a substantial change in topography of the project site. Additionally, the proposed project would not result in an increase of impervious surfaces from existing site conditions. Thus, impacts in this regard are anticipated to be less than significant.

Mitigation Measures: No mitigation is required.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. Refer to Responses 4.9(a) and 4.9(c), above. The proposed project would not result in an increase of impervious surfaces and drainage is anticipated to be similar to existing site conditions. Additionally, the project would be required to comply with NPDES Phase I Municipal Stormwater Permits, which would ensure that potential water quality impacts are minimized to a less than significant level. Thus, impacts in this regard are anticipated to be less than significant.

Mitigation Measures: No mitigation is required.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. The proposed project is not anticipated to result in water quality impacts as discussed in Responses 4.9(a) and 4.9(c). Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the project area, the project site is located outside of the 100-year flood zone.[2] No impacts would result in this regard.

Mitigation Measures: No mitigation is required.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. As stated above in Response 4.9(g), the project site is located outside of the 100-year flood hazard area. No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact. According to the Public Safety Element of the *General Plan*, the failure of structures that might cause flooding are dikes in the waterfront area of the City and flood-control dams which lie upstream from the City of Long Beach. Areas within 2 feet above mean sea level (msl) are considered most susceptible and areas over 2 feet up to 5 feet above msl are considered secondary flooding zones. The project site is located at approximately 55 feet above msl.

Three flood control dams lie upstream from the City: Sepulveda Basin, Hansen Basin, and Whittier Narrows Basin. The Sepulveda and Hansen Basins lie more than 30 miles upstream from where the Los Angeles River passes through the City. Due to the intervening low and flat ground and the distance involved, flood waters resulting from a dam failure at either of these reservoirs would be expected to dissipate before reaching the City of Long Beach. In the event of failure of the Whittier Narrows Dam while full, flooding could occur along both sides of the San Gabriel River where it passes through the City. However, the project site is approximately 3.5 miles west of the San Gabriel River and not located within areas of potential flooding according to the Public Safety Element of the *General Plan*. Further, due to the infrequent periods of high precipitation and high river flow, the probability of flooding as a result of seismically

[2] Federal Emergency Management Agency, Flood Insurance Rate Map #06037C1970F, Panel 1970 of 2350, revised September 26, 2008.

induced failure of these structures is considered to be very low. Therefore, impacts in this regard would be less than significant for the project area.

Mitigation Measures: No mitigation is required.

j) Inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of a sea floor associated with large, shallow earthquakes. Mudflows result from the downslope movement of soil and/or rock under the influence of gravity.

The project site is located approximately 1.8 miles northwest of the Colorado Lagoon and approximately 3 miles from the Long Beach Marina and is not in the vicinity of a dam, reservoir, or storage tank capable of creating a seiche. Thus, impacts with regard to a seiche are not anticipated. Additionally, the project site is located approximately 2.7 miles north of the Pacific Ocean. Based on the State of California *Tsunami Inundation Map for Emergency Planning* for the Long Beach Quadrangle, the project site is not situated within the tsunami inundation area.[3] Further, there are no sources of potential mudflow capable of inundating the project site due to the developed nature of the area and the relatively flat topography of the vicinity. Therefore, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

[3] California Geological Survey, *Tsunami Inundation Map for Emergency Planning*, Long Beach Quadrangle, Scale 1:24,000, March 1, 2009.

4.10 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?				✓
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			✓	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

a) Physically divide an established community?

No Impact. The proposed project would be constructed within a fully developed area and would include a light industrial/manufacturing facility, replacing the existing USPS facility on-site. Surrounding land uses in proximity to the project site are primarily comprised of industrial, office, institutional, governmental, medical, residential, and transportation-related uses. As the project would be similar in character to the existing on-site use and off-site industrial uses to the north, project implementation would not physically divide an established community. As such, no impacts would result in this regard.

Mitigation Measures: No mitigation is required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The *General Plan* designates the project site as "LUD 7; Mixed Uses." A combination of land uses intended for this district include, but are not limited to, employment centers such as retail, offices, medical facilities; high density residences; visitor-serving facilities; personal and professional services; or recreational facilities. According to the *General Plan*, uses that have a detrimental effect on the ambiance, environment, or social well-being on the area, such as industrial and manufacturing uses, warehousing activities, and outside storage, are not intended for inclusion in the Mixed Uses District. However, the *General Plan* concludes that "this is not to preclude the assignment of this district designation to areas which have as their base industrial/manufacturing/warehousing uses." As the site currently includes similar uses as those proposed, no amendment to the *General Plan* would be required as part of the project. Thus, the project would be consistent with the *General Plan*, pertaining to land use and relevant planning.

The Zoning Ordinance zones the project site as "Institutional (I)." "I" zoning is intended to allow for educational, religious, or public service activities of a nonprofit nature and/or by facilities for public assemblage. Implementation of the proposed project would require a zone change and zoning code amendment to replace the existing "I" zoning to a new subarea of "Planned Development District 7 (PD-7), Long Beach Business Center" oriented toward light industrial uses. The PD designation allows for flexible development plans to be prepared for areas of the City which may benefit from the formal recognition of unique or special land uses and the definition of special design policies and standards not otherwise possible under conventional zoning district regulations. With approval of the proposed project, including approval of the proposed zone change and zoning amendment, the zoning of the proposed project would be consistent with the *LBMC*.

Table 4.10-1, *Long Beach Business Center PD-7 Development Standards*, provides a comparison of the *LBMC* general development standards for the PD-7 and the proposed project. As shown in Table 4.10-1, project implementation would adhere to the PD-7 development standards set forth in the *LBMC*.

Table 4.10-1
Long Beach Business Center PD-7 Development Standards

Standard	PD-7	Proposed Project
Minimum Lot Size	15,000 square feet	831,623 square feet
Maximum Lot Coverage	50%	47.8%
Maximum Building Height	45 feet (30 feet for Lots 4-10)	Maximum 45 feet in height
Maximum Non-Building Structure Height	45 feet (30 feet for Lots 4-10)	N/A
Landscaping	• Provide irrigation, ground cover, shrubs, and trees. • Parking Lots: one tree (15-gallon) per five parking spaces and three shrubs per tree (for lots 4 – 10, a minimum of one fifteen-gallon evergreen tree shall be provided for each thirty linear feet of rear property line). One tree must be 24-inch box size or greater for each 100 feet of street frontage. One 36-inch box tree may be substituted for three 15-gallon trees (approval required from the Director of Planning and Building).	Project implementation would adhere to the landscaping standards set forth in Long Beach Business Center PD-7.
Walls and Fences (Height)	• 12 feet (maximum height); • 8 feet (adjoining or abutting a public right-of-way)	8 feet (adjoining or abutting a public right-of-way)
Screening	All parking lots facing a public street shall be screened by a solid wall or compact evergreen hedge not less than three feet in height, or by a landscaped berm not less than three feet in height or by a landscape screening plan approved by the Director of Planning and Building.	Project implementation would adhere to the screening standards set forth in Long Beach Business Center PD-7.

Source: City of Long Beach, *Long Beach Business Center Planned Development District (PD-7)*, Ordinance History: C-5621, 1980; C-6777, 1990.

The *Long Beach Business Center Planned Development District (PD-7)* (Ordinance History: C-5621, 1980; C-6777, 1990), identifies the number of vehicle parking spaces required based on land use. Based on the *Long Beach Business Center PD-7*, the project would require a total of 621 parking spaces and 638 parking spaces would be provided to accommodate the proposed project; refer to Table 4.10-2, *Proposed Parking*. Thus, the project would not conflict with the City's *Long Beach Business Center PD-7* regarding required parking.

Table 4.10-2
Proposed Parking

Use	Percentage of Use	Square Feet	PD-7 Requirement	Total
Building 1				
Office	15	30,979	2/1000	62
Manufacturing	20	41,305	2/1000	83
Warehouse	65	134,241	1/1000	134
			Total Parking Required	*279*
			Total Proposed Parking	*286*
Building 2				
Office	15	17,028	2/1000	34
Manufacturing	35	39,732	2/1000	79
Warehouse	50	56,760	1/1000	57
			Total Parking Required	*170*
			Total Proposed Parking	*175*
Building 3				
Office	15	16,128	2/1000	32
Manufacturing	45	48,384	2/1000	97
Warehouse	40	43,008	1/1000	43
			Total Parking Required	*172*
			Total Proposed Parking	*177*
			Total Parking Required	***621***
			Total Proposed Parking	***638***

Title 20, *Subdivisions*, of the *LBMC* provides regulations for the division of an existing lot. The intent of the regulations is:

A. *To provide policies, standards, requirements, and procedures to regulate and control the design and improvement of all subdivisions within the City;*

B. *To implement the objectives, policies, and programs of the general plan by ensuring that all proposed subdivisions, together with the provisions for their design and improvement, are consistent with all elements of the general plan and all applicable specific plans;*

C. *To preserve and protect the unique and valuable natural resources and amenities of the City's environment and to maximize the public's access to and enjoyment of such resources and amenities through the dedication or continuance of appropriate public easements thereto;*

D. *To provide lots of sufficient size and appropriate design for the public health, safety, and welfare;*

E. *To provide an adequate system of utilities needed for public health, safety, and convenience;*

F. *To provide streets of adequate capacity and design for traffic, and to ensure maximum safety for pedestrians and vehicles; and*

G. *To expedite the review and decision on subdivision requested.*

In accordance with Title 20 of the *LBMC*, the City of Long Beach, Department of Public Works Engineering Bureau, *Standard Subdivision Requirements*, require public right-of-way, off-site, traffic, and pedestrian improvements, as well

as long term maintenance requirements. These requirements include Americans with Disabilities Act (ADA) compliance, roadway widening and cul-de-sac or hammerhead improvements, bus stop improvements, relocation of and upgrades to street fixtures and utilities, utility easements, landscaping and irrigation, drainage, and water quality. With adherence to the *Standard Subdivision Requirements*, the Tentative Parcel Map would comply with Title 20 of the *LBMC*. Thus, less than significant impacts would result in this regard.

Mitigation Measures: No mitigation is required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. As stated in Response 4.4(f), the project site is not located within a Natural Community Conservation Plan (NCCP) and/or Habitat Conservation Plan (HCP).[1, 2] As such, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

[1] U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, *HCP/NCCP Planning Areas in Southern California*, October 2008.

[2] California Department of Fish and Wildlife, *California Regional Conservation Plans*, August 2015.

4.11 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			✓	
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			✓	

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Less Than Significant Impact. Historically, the primary mineral resources within the City of Long Beach have been oil and natural gas. However, oil and natural gas extraction has diminished over the last century as the resources have become depleted. Today, extraction operations continue, but on a reduced scale compared to past levels. The proposed project would construct a light industrial/manufacturing facility, including three buildings, associated parking, and circulation improvements at the existing USPS facility. According to Figure 9.6, *Mineral Resources*, of the *Los Angeles County General Plan*, designated Mineral Resources Zones are identified on and within the vicinity of the project site (as Oil and Gas Resources). However, no mineral extraction has occurred on-site since development of the site in the 1970's. Implementation of the proposed project would result in similar operations as the existing condition and would not result in mineral extraction activities. Additionally, development of the project would not result in a loss of availability of this identified mineral resource at the project site and within the area. As such, less than significant impacts would result in this regard.

Mitigation Measures: No mitigation is required.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Less Than Significant Impact. Refer to Response 4.11(a), above.

Mitigation Measures: No mitigation is required.

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4.12 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. 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?		✓		
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		✓		
e. 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?				✓
f. 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?				✓

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air, and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear deemphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. On this scale, the human range of hearing extends from approximately 3 dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing; therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3 dBA and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6 dBA and about 7.5 dBA per doubling of distance.

There are a number of metrics used to characterize community noise exposure, which fluctuate constantly over time. One such metric, the equivalent sound level (L_{eq}), represents a constant sound that, over the specified period, has the same sound energy as the time-varying sound. Noise exposure over a longer period of time is often evaluated based on the Day-Night Sound Level (L_{dn}). This is a measure of 24-hour noise levels that incorporates a 10-dBA penalty for sounds occurring between 10:00 PM and 7:00 AM. The penalty is intended to reflect the increased human sensitivity to noises occurring during nighttime hours, particularly at times when people are sleeping and there are lower ambient noise conditions. Typical L_{dn} noise levels for light and medium density residential areas range from 55 dBA to 65 dBA.

Two of the primary factors that reduce levels of environmental sounds are increasing the distance between the sound source to the receiver and having intervening obstacles such as walls, buildings, or terrain features between the sound source and the receiver. Factors that act to increase the loudness of environmental sounds include moving the sound source closer to the receiver, sound enhancements caused by reflections, and focusing caused by various meteorological conditions.

REGULATORY SETTING

State of California

The State Office of Planning and Research *Noise Element Guidelines* include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The *Noise Element Guidelines* contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the Community Noise Equivalent Level (CNEL). A noise environment of 50 CNEL to 60 CNEL is considered to be of "normally acceptable" for residential uses. The Office of Planning and Research recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate.

City of Long Beach

Municipal Code

Chapter 8.80, *Noise,* of the *LBMC* sets forth all noise regulations controlling unnecessary, excessive, and annoying noise and vibration in the City. As outlined in Section 8.80.150 of the *LBMC*, maximum exterior noise levels are based on land use districts. According to the *Noise District Map* of the *LBMC*, the project site is located within Receiving Land Use District One and surrounding uses to the project site are located within Receiving Land Use District Four. District One is defined as "predominantly residential uses with other land use types also present" and District Four is defined as "predominantly industrial uses with other land use types also present." Table 4.12-1, *Long Beach Noise Limits*, summarizes the exterior and interior noise limits for both District One and District Four.

Table 4.12-1
Long Beach Noise Limits

Land Use District	Exterior		Interior	
	Exterior Noise Level (Leq) 7 AM to 10 PM	Exterior Noise Level (Leq) 10 PM to 7 AM	Interior Noise Level (Leq) 7 AM to 10 PM	Interior Noise Level (Leq) 10 PM to 7 AM
District One (Predominantly Residential)	50	45	45	35
District Two (Predominantly Commercial)	60	55	45	35
District Three (Predominantly Industrial)	65	65	--	--
District Four (Predominantly Industrial)	70	70	--	--

Notes:
1. District Four limits are intended primarily for use at their boundaries rather than for noise control within the district.
2. No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measures from any other property to exceed:
   - The noise standard for that land use district as specified in Table 4.12-1 for a cumulative period of more than five (5) minutes in any hour; or
   - The noise standard plus five decibels (5 dB) for a cumulative period of more than one (1) minute in any hour; or
   - The noise standard plus ten decibels (10 dB) or the maximum measured ambient, for any period of time.

Source: City of *Long Beach Municipal Code (LBMC)*, Section 8.80.160 and Section 8.80.170, 1977.

Section 8.80.202, *Construction Activity – Noise Regulations*, of the *LBMC* specifies the following construction-related noise standards:

> *The following regulations shall apply only to construction activities where a building or other related permit is required or was issued by the Building Official and shall not apply to any construction activities within the Long Beach harbor district as established pursuant to Section 201 of the City Charter.*
>
> A. *Weekdays and federal holidays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM and 7:00 AM the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this Section, a federal holiday shall be considered a weekday.*
>
> B. *Saturdays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, except for emergency work authorized by the Building Official.*
>
> C. *Sundays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.*
>
> D. *Owner's/employer's responsibility. It is unlawful for the landowner, construction company owner, contractor, subcontractor or employer of persons working, laboring, building, or assisting in construction to permit construction activities in violation of provisions in this Section.*
>
> E. *Sunday work permits. Any person who wants to do construction work on a Sunday must apply for a work permit from the Noise Control Officer. The Noise Control Officer may issue a Sunday work permit if there is good cause shown; and in issuing such a permit, consideration will be given to the nature of the work and its proximity to residential areas. The permit may allow work on Sundays, only between 9:00 AM and 6:00 PM, and it shall designate the specific dates when it is allowed.*

EXISTING STATIONARY SOURCES

The project area is urbanized and generally built-out. The project site is located within the existing USPS site which includes mail processing and a USPS retail facility. Surrounding land uses in proximity to the project site are primarily comprised of industrial, office, institutional, governmental, medical, residential, and transportation-related uses. The primary sources of stationary noise in the project vicinity are urban-related activities (i.e., mechanical equipment associated with existing industrial uses). The noise associated with these sources may represent a single-event noise occurrence, short-term or long-term/continuous noise.

EXISTING MOBILE SOURCES

The majority of the existing noise from mobile sources in the project area is generated from vehicle sources along Redondo Avenue and East Burnett Street, adjacent to the project site. As shown in Table 4.12-2, *Existing Traffic Noise Levels*, mobile noise sources in the vicinity of the project site range from 52.5 dBA to 67.2 dBA. Mobile source noise was modeled using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108), which incorporates several roadway and site parameters. The model does not account for ambient noise levels. Noise projections are based on modeled vehicular traffic as derived from the Transportation Impact Analysis

(TIA) prepared by Kittelson and Associates (October 2017); refer to Appendix D, *Transportation Impact Analysis*, of this document. A 40-mile per hour average vehicle speed along Redondo Avenue was assumed for existing conditions based on empirical observations and posted maximum speeds. Average daily traffic estimates were obtained from the TIA.

Table 4.12-2
Existing Traffic Noise Levels

Roadway Segment	Existing Conditions				
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
Cherry Avenue					
North of Willow Street	26,315	65.8	463	146	46
South of Willow Street	25,460	65.7	448	142	45
Spring Street					
East of I-405	31,250	66.6	549	174	55
I-405 to Temple Avenue	32,853	66.8	578	183	58
Temple Avenue to Redondo Avenue	29,485	66.3	519	164	52
Temple Avenue					
Spring Street to I-405	8,660	61.2	152	48	15
I-405 to Willow Street	10,183	61.9	179	57	18
Redondo Avenue					
Spring Street to Willow Street	16,710	64.0	294	93	29
Willow Street to Burnett Street	23,758	65.6	418	132	42
Burnett Street to Project Driveway	24,485	65.7	431	136	43
Project Driveway to Industry Drive/Project Driveway	24,163	65.6	425	134	42
Industry Drive/Project Driveway to Hill Street	24,095	65.6	424	134	42
Hill Street to Stearns Street	24,158	65.6	425	134	42
Stearns Street to Pacific Coast Highway (SR-1)	22,375	65.3	394	125	39
Grand Avenue					
Willow Street to Burnett Street	2,405	54.1	29	9	3
Lakewood Boulevard					
North of Willow Street	38,975	67.5	685	217	69
South of Willow Street	32,495	66.7	571	181	57
Willow Street					
Cherry Avenue to Temple Avenue	31,623	66.6	556	176	56
Temple Avenue to Redondo Avenue	24,795	65.5	436	138	44
Redondo Avenue to Grand Avenue	34,630	67.0	610	193	61
Grand Avenue to Lakewood Boulevard	36,535	67.2	643	203	64
Burnett Street					
Redondo Avenue to Grand Avenue	1,665	52.5	20	6	2
Hill Street					
West of Redondo Avenue	6,325	58.3	76	24	8
Stearns Street					
East of Redondo Avenue	7,270	57.1	56	18	6
Pacific Coast Highway (SR-1)					
East of Redondo Avenue	30,895	65.0	371	117	37
West of Redondo Avenue	29,250	64.7	351	111	35

Notes: ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level.
Source: Based on traffic data within the *Transportation Impact Analysis*, prepared by Kittelson and Associates, October 2017.

NOISE MEASUREMENTS

In order to quantify existing ambient noise levels in the project area, Michael Baker International (Michael Baker), conducted three short-term noise measurements on November 2, 2017; refer to Table 4.12-3, *Noise Measurements*. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. The ten-minute measurements were taken between 11:00 AM and 12:00 PM Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day and relate closely with the noise standards for the project area. Exhibit 4.12-1, *Sensitive Receptors and Noise Measurement Locations*, depicts the location of the noise measurements as well as the surrounding sensitive receptors.

Table 4.12-3
Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Peak (dBA)	Time
1	On Burnett Street, approximately 545 feet east of Redondo.	55.9	44.5	72.0	92.8	11:14 AM
2	On 23rd Street, approximately 80 feet west of Euclid Avenue.	60.2	56.2	71.5	90.1	11:41 AM
3	On Redondo Avenue, approximately 200 feet north of Industry Drive.	69.1	53.9	77.5	88.3	12:00 PM
Source: Michael Baker International, September 21, 2016.						

Meteorological conditions were cloudy skies, cool temperatures, with moderately light wind speeds (less than 5 miles per hour), and low humidity. Measured noise levels during the daytime measurements ranged from 55.9 to 69.1 dBA L_{eq}. Noise monitoring equipment used for the ambient noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters. The results of the field measurements are included in Appendix C, *Noise Data*.

a) 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?

Less Than Significant Impact With Mitigation Incorporated. It is difficult to specify noise levels that are generally acceptable to everyone; what is annoying to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels, or based on studies of the ability of people to sleep, talk, or work under various noise conditions. However, all such studies recognize that individual responses vary considerably. Standards usually address the needs of the majority of the general population.

As stated above, the *LBMC* includes some regulations controlling unnecessary, excessive, and annoying noise within the City. As outlined in the *LBMC*, maximum noise levels are based on land use districts.

Short-Term Noise Impacts

Construction activities generally are temporary and have a short duration, resulting in periodic increases in the ambient noise environment. Construction activities would include demolition, site preparation, building construction, and paving. Ground-borne noise and other types of construction-related noise impacts typically occur during the initial demolition and earthwork phases. These phases of construction have the potential to create the highest levels of noise. Typical noise levels generated by construction equipment are shown in Table 4.12-4, *Maximum Noise Levels Generated by Construction Equipment*. It should be noted that the noise levels identified in Table 4.12-4 are maximum sound levels (L_{max}), which are the highest individual sound occurring at an individual time period. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings.

Source: Google Earth 2017.

NOT TO SCALE

Michael Baker INTERNATIONAL

12/17 | JN 161401

2300 REDONDO AVENUE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Sensitive Receptors and Noise Measurement Locations

Exhibit 4.12-1

Table 4.12-4
Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Acoustical Use Factor[1]	L_{max} at 50 Feet (dBA)
Concrete Saw	20	90
Crane	16	81
Augur Drill Rig	20	85
Concrete Mixer Truck	40	79
Backhoe	40	78
Dozer	40	82
Excavator	40	81
Forklift	40	78
Paver	50	77
Roller	20	80
Tractor	40	84
Water Truck	40	80
Grader	40	85
General Industrial Equipment	50	85

Note:
1. Acoustical Use Factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Source: Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054)*, January 2006.

Other primary sources of acoustical disturbance would be due to random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

The closest sensitive receptors to the project site are the single family residential uses immediately to the east of the project site. These sensitive uses may be exposed to elevated noise levels during project construction.

Construction noise would be acoustically dispersed throughout the project site and not concentrated in one area near adjacent sensitive uses. Pursuant to the *LBMC*, all construction activities may only occur between the hours of 7:00 AM and 7:00 PM, Monday through Friday, and between the hours of 9:00 AM and 6:00 PM on Saturday. Construction activities are prohibited on Sundays. Implementation of Mitigation Measure NOI-1 would further minimize impacts from construction noise as it requires the use of best management practices. Mitigation Measure NOI-1 requires construction equipment to be equipped with properly operating and maintained mufflers and other state required noise attenuation devices. Thus, a less than significant noise impact would result from construction activities.

Refer to Response 4.12(c) for a discussion of the proposed project's long-term operational noise impacts.

Mitigation Measures:

NOI-1 Prior to Grading Permit issuance, the project applicant shall demonstrate, to the satisfaction of the City of Long Beach City Engineer that the project complies with the following:

- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.

- Property owners and occupants located within 100 feet of the project boundary shall be sent a notice, at least 15 days prior to commencement of construction of each phase, regarding the construction schedule of the proposed project. A sign, legible at a distance of 50 feet shall also be posted at the project construction site. All notices and signs shall be reviewed and approved by the Development Services Department, prior to mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and a telephone number where residents can inquire about the construction process and register complaints.

- Prior to issuance of any Grading or Building Permit, the Contractor shall provide evidence that a construction staff member will be designated as a Noise Disturbance Coordinator and will be present on-site during construction activities. The Noise Disturbance Coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the Noise Disturbance Coordinator shall notify the City within 24-hours of the complaint and determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the Public Works Department. All notices that are sent to residential units immediately surrounding the construction site and all signs posted at the construction site shall include the contact name and the telephone number for the Noise Disturbance Coordinator.

- Prior to issuance of any Grading or Building Permit, the project applicant shall demonstrate to the satisfaction of the City Engineer that construction noise reduction methods shall be used where feasible. These reduction methods include shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and electric air compressors and similar power tools.

- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Project construction can generate varying degrees of ground-borne vibration, depending on the construction procedure and the construction equipment used. 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 receiver building(s). 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, to slight damage at the highest levels. Ground-borne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.20 inch/second) appears to be conservative. The types of construction vibration impact include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. The vibration produced by construction equipment is illustrated in Table 4.12-5, *Typical Vibration Levels for Construction Equipment*.

Table 4.12-5
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 25 feet (inches/second)	Approximate peak particle velocity at 50 feet (inches/second)
Large bulldozer	0.089	0.0315
Loaded trucks	0.076	0.0269
Small bulldozer	0.003	0.0011
Jackhammer	0.035	0.0124

Notes:
1. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006. Table 12-2.
2. Calculated using the following formula:

$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

The nearest structures to the project site are the single family residential uses immediately to the east of the project site. The closest adjacent structure is located approximately 25 feet to the east of the project boundary. Groundborne vibration decreases rapidly with distance. As indicated in Table 4.12-5, based on the FTA data, vibration velocities from typical heavy construction equipment operation that would be used during project construction range from 0.003 to 0.089 inch-per-second peak particle velocity (PPV) at 25 feet from the source of activity. With regard to the proposed project, groundborne vibration would be generated primarily during grading activities on-site and by off-site haul-truck travel. Although the adjacent structure is located approximately 25 feet of the project site, the proposed construction activities would not be capable of exceeding the 0.2 inch-per-second PPV significance threshold for vibration, as construction activities would be limited and would not be concentrated within 25 feet of the adjoining structures for an extended period of time. Therefore, vibration impacts would be less than significant.

Operational Vibration Impacts

The project proposes light industrial/manufacturing uses that would not generate ground-borne vibration that could be felt at surrounding uses. The proposed project would not involve railroads. Additionally, operational vibration would also be less than significant; no major equipment that would be capable of transmitting vibrations beyond the property boundaries is envisioned, and the rubber-tired heavy and medium trucks and automobiles associated with project operations would not create vibration levels higher than already experienced along the adjacent arterial roadways. Less than significant impacts would occur is this regard.

Mitigation Measures: No mitigation is required.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Implementation of the proposed project would result in the demolition of the existing USPS facility and construction of three light industrial/manufacturing buildings and associated parking within the project site, as well as circulation improvements along Redondo Avenue. Long-term operation of the project would increase traffic in the vicinity of the project site during AM and PM peak hour periods, due to on-site employee vehicle trips and heavy truck trips. Future increases in traffic volumes could contribute to the existing noise environment.

Off-Site Mobile Noise

Existing With Project Conditions

Project area roadway segment noise levels for the "Existing" and "Existing With Project" scenarios were compared. According to Table 4.12-6, *Existing With Project Traffic Noise Levels*, under the "Existing" scenario, noise levels at a distance of 100 feet from the centerline would range from approximately 52.5 dBA to 67.5 dBA, with the highest noise levels occurring along Lakewood Boulevard, north of Willow Street. The "Existing With Project" scenario noise levels at a distance of 100 feet from the centerline would range from approximately 54.0 dBA to 67.5 dBA, with the highest noise levels occurring along Lakewood Boulevard, north of Willow Street. As shown in Table 4.12-6, the noise levels would result in a maximum increase of 1.5 dBA as a result of the proposed project. This increase in noise would occur along Burnett Street, between Redondo Avenue and Grand Avenue. As these noise level increases are below 3.0 dBA[1], a less than significant impact would occur in this regard.

Table 4.12-6
Existing With Project Traffic Noise Levels

Roadway Segment	Existing					Existing With Project					Difference In dBA @ 100 Feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
Cherry Avenue											
North of Willow Street	26,315	65.8	463	146	46	26,630	65.9	468	148	47	0.1
South of Willow Street	25,460	65.7	448	142	45	25,460	65.7	448	142	45	0.0
Spring Street											
East of I-405	31,250	66.6	549	174	55	31,580	66.7	556	176	56	0.1
I-405 to Temple Avenue	32,853	66.8	578	183	58	33,395	66.9	588	186	59	0.1
Temple Avenue to Redondo Avenue	29,485	66.3	519	164	52	30,058	66.4	529	167	53	0.1
Temple Avenue											
Spring Street to I-405	8,660	61.2	152	48	15	8,970	61.3	158	50	16	0.1
I-405 to Willow Street	10,183	61.9	179	57	18	10,570	62.0	186	59	19	0.1
Redondo Avenue											
Spring Street to Willow Street	16,710	64.0	294	93	29	17,400	64.2	306	97	31	0.2
Willow Street to Burnett Street	23,758	65.6	418	132	42	26,588	66.1	468	148	47	0.5
Burnett Street to Project Driveway	24,485	65.7	431	136	43	26,655	66.1	469	148	47	0.4
Project Driveway to Industry Drive/ Project Driveway	24,163	65.6	425	134	42	25,610	65.9	450	142	45	0.3

[1] According to the California Department of Transportation's *Traffic Noise Analysis Protocol*, dated May 2011, a 3.0 dB difference in noise level is generally the point at which the human ear will perceive a difference in noise level.

Table 4.12-6 [continued]
Existing With Project Traffic Noise Levels

Roadway Segment	Existing					Existing With Project					Difference In dBA @ 100 Feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
Industry Drive/Project Driveway to Hill Street	24,095	65.6	424	134	42	24,815	65.8	437	138	44	0.2
Hill Street to Stearns Street	24,158	65.6	425	134	42	24,878	65.8	438	138	44	0.2
Stearns Street to Pacific Coast Highway (SR-1)	22,375	65.3	394	125	39	22,975	65.4	404	128	40	0.1
Grand Avenue											
Willow Street to Burnett Street	2,405	54.1	29	9	3	2,635	54.5	32	10	3	0.4
Lakewood Boulevard											
North of Willow Street	38,975	67.5	685	217	69	39,700	67.5	698	221	70	0.0
South of Willow Street	32,495	66.7	571	181	57	32,495	66.7	571	181	57	0.0
Willow Street											
Cherry Avenue to Temple Avenue	31,623	66.6	556	176	56	32,323	66.7	569	180	57	0.1
Temple Avenue to Redondo Avenue	24,795	65.5	436	138	44	25,595	65.7	450	142	45	0.2
Redondo Avenue to Grand Avenue	34,630	67.0	610	193	61	35,685	67.1	628	199	63	0.1
Grand Avenue to Lakewood Boulevard	36,535	67.2	643	203	64	37,813	67.4	666	210	67	0.2
Burnett Street											
Redondo Avenue to Grand Avenue	1,665	52.5	20	6	2	2,350	54.0	28	9	3	1.5
Hill Street											
West of Redondo Avenue	6,325	58.3	76	24	8	6,325	58.3	76	24	8	0.0
Stearns Street											
East of Redondo Avenue	7,270	57.1	56	18	6	7,390	57.2	57	18	6	0.1
Pacific Coast Highway (SR-1)											
East of Redondo Avenue	30,895	65.0	371	117	37	31,135	65.0	374	118	37	0.0
West of Redondo Avenue	29,250	64.7	351	111	35	29,490	64.8	354	112	35	0.1

ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level

Source: Based on traffic data within the project *Transportation Impact Analysis*, prepare by Kittelson and Associates, October 2017.

Future Condition

The "Future Without Project" and "Future With Project" scenarios were compared. According to Table 4.12-7, *Future Traffic Noise Levels*, under the "Future Without Project" scenario, the noise levels would range from approximately 52.6 dBA to 67.5 dBA, with the highest noise levels occurring along Lakewood Boulevard, north of Willow Street. Under the "Future With Project" scenario, the noise levels would range from approximately 54.1 dBA to 67.6 dBA, with the highest noise levels occurring along Lakewood Boulevard, north of Willow Street. As shown in Table 4.12-7, the noise levels would result in a maximum increase of 1.5 dBA as a result of the proposed project. This increase in noise would occur along Burnett Street, between Redondo Avenue and Grand Avenue. As these noise level increases are below 3.0 dBA, a less than significant impact would occur in this regard.

Table 4.12-7
Future Traffic Noise Levels

Roadway Segment	Future Without Project					Future With Project					Difference In dBA @ 100 Feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
Cherry Avenue											
North of Willow Street	26,845	65.9	472	149	47	27,160	66.0	478	151	48	0.1
South of Willow Street	25,965	65.8	456	144	46	25,965	65.8	456	144	46	0.0
Spring Street											
East of I-405	31,875	66.7	561	177	56	32,205	66.8	566	179	57	0.1
I-405 to Temple Avenue	33,510	66.9	589	186	59	34,053	67.0	599	189	60	0.1
Temple Avenue											
Spring Street to I-405	8,833	61.3	156	49	16	9,143	61.4	161	51	16	0.1
I-405 to Willow Street	10,388	62.0	183	58	18	10,775	62.1	190	60	19	0.1
Redondo Avenue											
Spring Street to Willow Street	17,045	64.1	300	95	30	17,735	64.3	312	99	31	0.2
Willow Street to Burnett Street	24,233	65.6	426	135	43	27,063	66.1	476	150	48	0.5
Burnett Street to Project Driveway	24,978	65.8	440	139	44	27,148	66.1	478	151	48	0.3
Project Driveway to Industry Drive/Project Driveway	24,645	65.7	434	137	43	26,093	66.0	459	145	46	0.3
Industry Drive/ Project Driveway to Hill Street	24,578	65.7	433	137	43	25,298	65.7	428	135	43	0.0
Hill Street to Stearns Street	24,640	65.7	434	137	43	25,360	65.8	446	141	45	0.1
Stearns Street to Pacific Coast Highway (SR-1)	22,818	65.4	401	127	40	23,418	65.5	412	130	41	0.1
Grand Avenue											
Willow Street to Burnett Street	2,450	54.2	29	9	3	2,680	54.6	32	10	3	0.4

Table 4.12-7 [continued]
Future Traffic Noise Levels

Roadway Segment	Future Without Project					Future With Project					Difference In dBA @ 100 Feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
Lakewood Boulevard											
North of Willow Street	39,760	67.5	700	221	70	40,485	67.6	713	225	71	0.1
South of Willow Street	33,150	66.8	583	184	58	33,150	66.8	583	184	58	0.0
Willow Street											
Cherry Avenue to Temple Avenue	32,255	66.8	585	185	59	32,955	66.8	580	183	58	0.0
Temple Avenue to Redondo Avenue	25,285	65.6	445	141	44	26,085	65.8	458	145	46	0.2
Redondo Avenue to Grand Avenue	35,318	67.1	621	196	62	36,373	67.2	640	202	64	0.1
Grand Avenue to Lakewood Boulevard	37,270	67.3	655	207	65	38,548	67.5	678	214	68	0.2
Burnett Street											
Redondo Avenue to Grand Avenue	1,698	52.6	20	6	2	2,383	54.1	29	9	3	1.5
Hill Street											
West of Redondo Avenue	6,455	58.4	78	25	8	6,455	58.4	78	25	8	0.0
Stearns Street											
East of Redondo Avenue	7,415	57.2	57	18	6	7,535	57.3	58	18	6	0.1
Pacific Coast Highway (SR-1)											
East of Redondo Avenue	31,520	65.1	379	120	38	31,760	65.1	381	121	38	0.0
West of Redondo Avenue	29,835	64.8	358	113	36	30,075	64.9	362	114	36	0.1

ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level;
Source: Based on traffic data within the project *Transportation Impact Analysis*, prepare by Kittelson and Associates, October 2017.

Cumulative Mobile Source Impacts

A project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level (i.e., auditory level increase) threshold. The combined effect compares the "Cumulative With Project" condition to "Existing" conditions. This comparison accounts for the traffic noise increase generated by a project combined with the traffic noise increase generated by projects in the cumulative project list. The following criterion has been utilized to evaluate the combined effect of the cumulative noise increase.

Combined Effect. The cumulative with project noise level ("Future With Project") would cause a significant cumulative impact if a 3.0 dB increase over existing conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use.

Although there may be a significant noise increase due to the proposed project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project. The following criterion has been utilized to evaluate the incremental effect of the cumulative noise increase.

Incremental Effects. The "Future With Project" causes a 1.0 dBA increase in noise over the "Future Without Project" noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded. Noise by definition is a localized phenomenon, and reduces as distance from the source increases. Consequently, only the proposed project and growth due to occur in the project site's general vicinity would contribute to cumulative noise impacts. Table 4.12-8, *Cumulative Noise Scenario*, provides traffic noise effects along roadway segments in the project vicinity for "Existing," "Future Without Project," and "Future With Project" conditions, including incremental and net cumulative impacts.

As indicated in Table 4.12-8, noise levels under the combined effects criterion would not exceed 3.0 dBA, and/or 1.0 dBA under the incremental effect criterion. As such, a cumulative noise impact would not occur. Therefore, there would not be any roadway segments that would result in significant impacts, as they would not exceed both the combined and incremental effects criteria. Therefore, the proposed project, in combination with cumulative background traffic noise levels, would result in less than significant impacts.

Stationary Noise Impacts

The project proposes a light industrial/manufacturing facility. Stationary noise sources associated with the proposed project would include mechanical equipment, slow moving trucks, parking activities, and pedestrian activity. Noise impacts to surrounding uses associated with implementation of the proposed project are anticipated to be less than significant.

- *Mechanical Equipment*. Typically, mechanical equipment noise is 55 dBA at 50 feet from the source. The nearest sensitive receptors, residential uses, are located approximately 100 feet east of the closest proposed building. Heating Ventilation and Air Conditioning (HVAC) units would be included on the roof of the structure, and would be located toward the center of the structure and be located behind a parapet. Noise attenuation would occur due to the housing structure and distance from the nearest sensitive receptors (more than 100 feet). Thus, the proposed project would likely not result in additional noise impacts to nearby receptors from HVAC units, and the nearest receptors would not be directly exposed to substantial noise from on-site mechanical equipment. Impacts in this regard would be less than significant.

- *Slow-Moving Trucks*. Typically, a medium 2-axle truck used to make deliveries can generate a maximum noise level of 75 dBA at a distance of 50 feet. These are levels generated by a truck that is operated by an experienced "reasonable" driver with typically applied accelerations. Higher noise levels may be generated by the excessive application of power. Lower levels may be achieved, but would not be considered representative of a nominal truck operation.

  The project proposes three buildings ranging in size from 97,520 to 196,525 square feet. All three buildings would be equipped with dock-high doors for truck loading/unloading and manufacturing/light industrial operations. The dock-high doors are concentrated away from the residential uses east of the project site. Additionally, an eight-foot-high wall currently exists between the project site and the surrounding uses to the east and south. As the docking operations are concentrated away from the residential uses and the eight-foot-high wall would remain in place, sensitive receptors would be shielded from potential operational-related noise impacts. The nearest sensitive receptors are located approximately 25 feet to the east of the project site boundary and approximately 100 feet from the closest building. Truck circulation and loading dock noise was modeled with the SoundPLAN software. SoundPLAN allows computer simulations of noise situations, and creates noise contour maps using reference noise levels, topography, point and area noise sources, mobile noise sources, and intervening structures. Noise levels from the trucks and loading docks are based on the SoundPLAN library sound power and reference spectrum data. SoundPLAN library data is based on a collection of reference noise levels and survey data. Based on the SoundPLAN results (refer to Appendix C, *Noise Data*), the loudest noise level at the closest sensitive receptor would be 48.9 dBA, and would not exceed the City's 50 dBA noise standard. Sensitive receptors surrounding the project site would not be directly exposed to on-site docking operations created by the proposed project. Therefore, a less than significant impact would occur.

Table 4.12-8
Cumulative Noise Scenario

Roadway Segment	Existing	Future Without Project	Future With Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	Difference In dBA Between Existing and Future With Project	Difference in dBA Between Future Without Project and Future With Project	
Cherry Avenue						
North of Willow Street	65.8	65.9	66.0	0.2	0.1	***No***
South of Willow Street	65.7	65.8	65.8	0.1	0.0	***No***
Spring Street						
East of I-405	66.6	66.7	66.8	0.2	0.1	***No***
I-405 to Temple Avenue	66.8	66.9	67.0	0.2	0.1	***No***
Temple Avenue to Redondo Avenue	66.3	66.4	66.5	0.2	0.1	***No***
Temple Avenue						
Spring Street to I-405	61.2	61.3	61.4	0.2	0.1	***No***
I-405 to Willow Street	61.9	62.0	62.1	0.2	0.1	***No***
Redondo Avenue						
Spring Street to Willow Street	64.0	64.1	64.3	0.3	0.2	***No***
Willow Street to Burnett Street	65.6	65.6	66.1	0.5	0.5	***No***
Burnett Street to Project Driveway	65.7	65.8	66.1	0.4	0.3	***No***
Project Driveway to Industry Drive/ Project Driveway	65.6	65.7	66.0	0.4	0.3	***No***
Industry Drive/Project Driveway to Hill Street	65.6	65.7	65.7	0.1	0.0	***No***
Hill Street to Stearns Street	65.6	65.7	65.8	0.2	0.1	***No***
Stearns Street to Pacific Coast Highway (SR-1)	65.3	65.4	65.5	0.2	0.1	***No***
Grand Avenue						
Willow Street to Burnett Street	54.1	54.2	54.6	0.5	0.4	***No***
Lakewood Boulevard						
North of Willow Street	67.5	67.5	67.6	0.1	0.1	***No***
South of Willow Street	66.7	66.8	66.8	0.1	0.0	***No***
Willow Street						
Cherry Avenue to Temple Avenue	66.6	66.8	66.8	0.2	0.0	***No***
Temple Avenue to Redondo Avenue	65.5	65.6	65.8	0.3	0.2	***No***
Redondo Avenue to Grand Avenue	67.0	67.1	67.2	0.2	0.1	***No***
Grand Avenue to Lakewood Boulevard	67.2	67.3	67.5	0.3	0.2	***No***
Burnett Street						
Redondo Avenue to Grand Avenue	52.5	52.6	54.1	1.6	1.5	***No***
Hill Street						
West of Redondo Avenue	58.3	58.4	58.4	0.1	0.0	***No***
Stearns Street						
East of Redondo Avenue	57.1	57.2	57.3	0.2	0.1	***No***
Pacific Coast Highway (SR-1)						
East of Redondo Avenue	65.0	65.1	65.1	0.1	0.0	***No***
West of Redondo Avenue	64.7	64.8	64.9	0.2	0.1	***No***

ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level;
Source: Based on traffic data within the project *Traffic Impact Analysis Report*, prepare by Kittelson and Associates, October 2017.

- *Parking Areas*. Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. However, the instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys may be an annoyance to adjacent noise-sensitive receptors. Estimates of the maximum noise levels associated with some parking lot activities are presented in Table 4.12-9, *Typical Noise Levels Generated by Parking Lots*. Conversations in parking areas may also be an annoyance to adjacent sensitive receptors. Sound levels of speech typically range from 33 dBA at 48 feet for normal speech to 50 dBA at 50 feet for very loud speech.

Table 4.12-9
Typical Noise Levels Generated by Parking Lots

Noise Source	Maximum Noise Levels at 50 Feet from Source
Car door slamming	63 dBA L_{eq}
Car starting	60 dBA L_{eq}
Car idling	61 dBA L_{eq}

It should be noted that parking lot noise are instantaneous noise levels compared to noise standards in the CNEL scale, which are averaged over time. As a result, actual noise levels over time resulting from parking lot activities would be far lower than what is identified in Table 4.12-9. Parking lot noise would occur within the surface parking lot on-site. Parking lot noise would be partially masked by background noise from traffic along Redondo Avenue and Burnett Street. Parking areas on the project site would be buffered by the existing eight-foot concrete block wall, proposed landscaping, an alley. Additionally, it should be noted that the garages of the sensitive receptors are located along the alley and would further attenuate noise from the project site. Although parking would be located along the perimeter of the site, the primary parking areas would be along Redondo Avenue, Burnett Street, and central to the project site. Most parking areas would be located more than 100 feet from the sensitive areas. As such, distance attenuation and attenuation from the existing concrete block wall would reduce parking lot noise to 49 dBA. Noise associated with parking lot activities is not anticipated to exceed the City's Noise Standards or the California Land Use Compatibility Standards during operation. Therefore, noise impacts from parking lots would be less than significant.

Mitigation Measures: No mitigation is required.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above the levels existing without the project?

Less Than Significant Impact With Mitigation Incorporated. Refer to Responses 4.12(a) and 4.12(c), above.

Mitigation Measures: Refer to Mitigation Measure NOI-1.

e) 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?

No Impact. The proposed project site is located within the 70 CNEL Airport Land Use Plan contour zone for Long Beach Airport (LGP).[2] LGP is located approximately 0.65 miles north of the project site. As the project proposes light industrial/manufacturing facilities, it would not expose sensitive uses or residents to excessive aircraft noise levels. Therefore, no impacts would occur in this regard.

[2] Los Angeles County Airport Land Use Commission, *Long Beach Airport, Airport Influence Area Map*, May 13, 2003.

Mitigation Measures: No mitigation is required.

f) 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?

No Impact. There are no private airstrips located within the project area or in the vicinity. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

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4.13 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✓	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. A project could induce population growth in an area, either directly (for example, by proposing new homes and/or businesses) or indirectly (for example, through extension of roads or other infrastructure). No residential uses would be developed as part of the project. Therefore, the project would not induce direct population growth in the City through new housing development.

The proposed project would involve the construction of 64,135 square feet of office, 234,009 square feet of warehouse, and 129,421 square feet of manufacturing uses, which would increase daytime employee population within the area. The employment created by the proposed project has the potential to result in an indirect growth in the City's population, since the potential exists that "future employees" (and their families) may choose to relocate to the City. Estimating the number of these future employees who would choose to relocate to the City would be highly speculative, since many factors influence personal housing location decisions (e.g., family income levels and the cost and availability of suitable housing in the local area). Additionally, housing opportunities exist for the project's future employees in the communities surrounding the City.

Although an uncertainty exists regarding the number of new employees whom may choose to relocate to the City, it is not anticipated that implementation of the proposed project would induce substantial population growth within the City either directly or indirectly. The project represents the redevelopment of an existing USPS facility, and would not result in the construction of new infrastructure that would eliminate a barrier to growth. As such, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project site is currently occupied by a USPS facility. There is no existing housing on-site. Project implementation would not displace any existing housing or persons, thus, would not necessitate the construction of replacement housing elsewhere. No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. Refer to Response 4.13(b).

Mitigation Measures: No mitigation is required.

4.14 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1) Fire protection?			✓	
2) Police protection?			✓	
3) Schools?			✓	
4) Parks?			✓	
5) Other public facilities?			✓	

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

1) Fire protection?

Less Than Significant Impact. The Long Beach Fire Department (LBFD) provides fire protection within the City. The LBFD has 24 stations, fire headquarters, and a beach operations facility within the City of Long Beach. The nearest station to the project site is Fire Station 17, located at 2241 Argonne Avenue, approximately 0.70 mile to the southeast. Project implementation is not anticipated to increase response times to the project site or surrounding vicinity. Additionally, the overall project design would be subject to compliance with the requirements set forth in the 2016 California Fire Code (CFC), 2016 California Building Code (CBC) and *LBMC*, Title 18, *Building and Construction*, and LBFD requirements for fire access. The project plans would be subject to LBFD site/building plan review, which would ensure adequate emergency access, fire hydrant availability, and compliance with all applicable codes.

The proposed project would construct three light industrial/manufacturing buildings at the existing USPS site. Operations would include office, manufacturing, and warehouse uses. The increase in development intensity could increase the demand for fire protection services at the project site. *LBMC* Chapter 18.23, *Fire Facilities Impact Fee*, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects. The purpose of such fees is to assure that the impacts created by proposed development pay its fair share of the costs required to support needed fire facilities and related costs necessary to accommodate such development. The amount of applicable fire facilities impact fee would be calculated based on the gross square feet of floor area and type of use and location in a non-residential development. Compliance with *LBMC* Chapter 18.23, which requires payment of fire facilities impact fee, would ensure that project implementation would result in a less than significant impact to fire protection services.

Project implementation is not anticipated to require the construction of new or physically altered fire protection facilities. Upon compliance with the existing CBC, CFC, *LBMC*, and LBFD design standards, impacts pertaining to fire hazards would be reduced to less than significant levels.

Mitigation Measures: No mitigation is required.

2) Police protection?

Less Than Significant Impact. The Long Beach Police Department (LBPD) provides law enforcement services to the City, including the project site. According to the *Police Reporting Districts with Divisions & Beats* map, prepared by the City of Long Beach, the project site is located within the East Police Division, Police Beat 14.[1] The LBPD operates out of a central location at 400 West Broadway, which is approximately 3.35 miles southwest of the project site. Long Beach Police East Division Sub-Station is located at 3800 East Willow Street, approximately 950 feet northeast of the project site.

Although the proposed project would introduce additional employees to the areas, it is not anticipated that this increase would have the capacity to result in a substantial adverse impact in relation to police services. The project would represent the redevelopment of an existing USPS facility. Further, the proposed project would not introduce a use that would substantially increase the need for police response. As a result, project implementation is not anticipated to increase response times to the project site or surrounding vicinity, or require the construction of new or physically altered police protection facilities. In addition, the project would be subject to site plan review by the City prior to project approval to ensure that it meets City requirements in regards to safety (e.g., nighttime security lighting) to minimize the potential for safety concerns. Thus, impacts in this regard would be less than significant.

Moreover, *LBMC* Chapter 18.22, *Police Facilities Impact Fee*, was adopted for the purpose of imposing mitigation fees on applicants seeking to construct development projects. The purpose of such fees is to assure that the impacts created by proposed development pay its fair share of the costs required to support needed police facilities and related costs necessary to accommodate such development. The amount of applicable police facilities impact fee would be calculated based on the gross square feet of floor area and type of use and location in a non-residential development. Compliance with *LBMC* Chapter 18.22, which requires payment of police facilities impact fee, would ensure that project implementation would result in a less than significant impact to police protection services.

Mitigation Measures: No mitigation is required.

3) Schools?

Less Than Significant Impact. The area surrounding the project site is served by the Long Beach Unified School District (LBUSD), which includes 84 public schools in the cities of Long Beach, Lakewood, Signal Hill, and Avalon on Catalina Island.[2] Charles A Buffum Elementary, is located approximately 0.45 mile east of the project site. Additionally, Benjamin F Tucker Elementary is located approximately 0.68 mile southeast of the project site.

Implementation of the proposed project would increase employees to the site, which could increase population in the project vicinity; refer to Section 4.13, *Population and Housing*. However, the potential population increase would not result in the need for the construction of additional school facilities, as the project would not result in a substantial increase in population. However, the project would be subject to the requirements of Assembly Bill (AB) 2926 and Senate Bill (SB) 50, which allow school districts to collect impact fees from developers of new projects. According to Section 65996 of the California Government Code, development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation." Thus, upon payment of required fees by the project applicant consistent with existing State requirements, impacts in this regard would be reduced to less than significant levels.

Mitigation Measures: No mitigation is required.

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[1] City of Long Beach, *Police Reporting Districts with Divisions & Beats*, http://www.longbeach.gov/ti/media-library/documents/gis/map-catalog/police-reporting-districts-map-large-(36-x-36)/, accessed April 24, 2017.

[2] City of Long Beach Unified School District, *About – Long Beach Unified School District*, http://www.lbusd.k12.ca.us/ District/, accessed April 24, 2017.

4) Parks?

Less Than Significant Impact. The project does not propose new or physically altered parks or recreational facilities. According to the City of Long Beach, Parks, Recreation, and Marine Department, the City maintains 162 parks and 26 community centers, among other programs and services.[3] Several parks including Discovery Well Park and Stearns Champions Park are located in close proximity of the project site. Although the project could indirectly increase population growth within the project vicinity, the nominal increase would not generate a demand for park facilities. Less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

5) Other public facilities?

Less Than Significant Impact. Library services for the project area are provided by the Long Beach Public Library. The closest public library to the project site is Brewitt Neighborhood Library, located at 4036 East Anaheim Street, approximately 1.1 miles to the southeast. The proposed project is industrial in nature, similar to the existing on-site uses, and would not result in impacts to public facilities beyond those described in Response 4.14(a)(4), including public libraries. Therefore, less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

[3] City of Long Beach, Parks, Recreation and Marine website, http://www.longbeach.gov/park/, accessed April 24, 2017.

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4.15 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant Impact. Refer to Response 4.14(a)(4). The proposed project would not result in a substantial increase in demand for parks or other recreational facilities, and would not result in physical deterioration of these facilities. Less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The project does not include recreational facilities, nor would it require the construction or expansion of existing recreational facilities. No impacts would result in this regard.

Mitigation Measures: No mitigation is required.

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4.16 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. 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?		✓		
b. 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?		✓		
c. 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?				✓
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		✓		
e. Result in inadequate emergency access?		✓		
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?		✓		

This section is based upon the *Transportation Impact Analysis 2300 Redondo Avenue* (Transportation Impact Analysis) prepared by Kittelson and Associates, dated November 2017; refer to Appendix D, *Transportation Impact Analysis*. The purpose of the Transportation Impact Analysis is to evaluate potential project impacts related to traffic and circulation in the vicinity of the project site. The evaluation considers impacts on local intersections and regional transportation facilities. The following analysis scenarios are evaluated in this section:

- Existing Conditions;
- Existing Plus Proposed Project Conditions;
- Cumulative (Year 2019) Conditions; and
- Cumulative (Year 2019) Plus Proposed Project Conditions.

STUDY INTERSECTIONS

The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed project as defined by the City. Based on the expected distribution of trips generated by the proposed project and subsequent communication with City staff, the following study intersections were selected for analysis; refer to Table 4.16-1, *Study Intersections*, and Exhibit 4.16-1, *Study Area Intersections*.

Source: Kittelson & Associates, November 2017.

NOT TO SCALE

Michael Baker INTERNATIONAL

12/17 | JN 161401

2300 REDONDO AVENUE PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Study Area Intersections

Exhibit 4.16-1

Table 4.16-1
Study Intersections

Intersection No.	Study Intersection
1	Redondo Avenue/Spring Street (signalized)
2	Redondo Avenue/Willow Street (signalized)
3	Redondo Avenue/Burnett Street (signalized)
4	Redondo Avenue/Project Driveway (unsignalized)
5	Redondo Avenue/Industry Drive/Project Driveway (unsignalized)
6	Redondo Avenue/Hill Street (signalized)
7	Redondo Avenue/Stearns Street (signalized)
8	Redondo Avenue/PCH (signalized)
9	Grand Avenue/Willow Street (signalized)
10	Grand Avenue/Burnett Street (unsignalized)
11	Lakewood Boulevard/Willow Street (signalized)
12	Temple Avenue/Spring Street (signalized)
13	Temple Avenue/I-405 Northbound Off-ramps (signalized)
14	Temple Avenue/Willow Street (signalized)
15	Cherry Avenue/Willow Street (signalized)
16	I-405 Southbound Off-ramps/Spring Street (signalized)

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

INTERSECTION ANALYSIS METHODOLOGY

Per City guidelines, the operating conditions at the signalized study intersections under the jurisdiction of the City were evaluated using the Intersection Capacity Utilization (ICU) methodology and the operating conditions at the unsignalized study intersections under the jurisdiction of the City were evaluated using the 2010 Highway Capacity Manual (HCM) methodology. Per the Caltrans guidelines, the operating conditions at the study intersections under the jurisdiction of Caltrans (intersections 8, 13, and 16) were evaluated using the 2010 HCM methodology. The ICU methodology is based on the sum of the volume to capacity (V/C) ratios for the conflicting movements at the intersection. The 2010 HCM methodology for signalized and all-way stop controlled intersections is based on the weighted average control delay (seconds per vehicle) for all intersection legs at the intersection and the 2010 HCM methodology for two-way stop controlled intersections is based on the weighted average control delay of the worst approach at the intersection. All intersections were analyzed using the Vistro analysis software.

Level of Service

Level of service (LOS) describes the operating conditions experienced by users of a facility. LOS is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort and convenience. LOS is designated A through F from best to worst, and cover the entire range of traffic operations that might occur. LOS A through LOS E generally represent traffic volumes at less than roadway capacity, while LOS F represents over capacity and/or forced flow conditions. The LOS for the ICU methodology is based on the V/C ratio and the LOS for the 2010 HCM methodology is based on the average control delay at the intersection.

Table 4.16-2, *Signalized Intersection LOS Definitions*, presents the range of the V/C ratios (from City standards) and the range of the average control delays (from 2010 HCM) associated with each LOS grade designation for signalized

intersections. Table 4.16-3, *Unsignalized Intersection LOS Definitions*, presents the range of the average control delays (from 2010 HCM) associated with each LOS grade designation for unsignalized intersections.

Table 4.16-2
Signalized Intersection LOS Definitions

LOS	Description of Traffic Conditions	Intersection Capacity Utilization Methodology (V/C) Ratio	2010 HCM Methodology (Average Delay in Seconds)
A	Excellent. No vehicle waits longer than one red light, and no approach phase is fully used.	≤0.600	≤10.0
B	Very good. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	0.601 - 0.700	>10.0 and ≤20.0
C	Good. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	0.701 – 0.800	>20.0 and ≤35.0
D	Fair. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit cleaning of developing lines, preventing excessive backups.	0.801 – 0.900	>35.0 and ≤55.0
E	Poor. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	0.901 – 1.000	>55.0 and ≤80.0
F	Failure. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.	> 1.000	>80.0

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Table 4.16-3
Unsignalized Intersection LOS Definitions

LOS	Description of Traffic Conditions	Average Delay Per Vehicle (Seconds)
A	Free flowing. Most vehicles do not have to stop.	≤0.600
B	Minimal delays. Some vehicles have to stop, although waits are not bothersome.	0.601 - 0.700
C	Acceptable delays. Significant numbers of vehicles have to stop because of steady, high traffic volumes. Still, many pass without stopping.	0.701 – 0.800
D	Tolerable delays. Many vehicles have to stop. Drivers are aware of heavier traffic. Cars may have to wait through more than one red light. Queues begin to form, often on more than one approach.	0.801 – 0.900
E	Significant delays. Cars may have to wait through more than one red light. Long queues form, sometimes on several approaches.	0.901 – 1.000
F	Excessive delays. Intersection is jammed. Many cars have to wait through more than one red light, or more than 60 seconds. Traffic may back up into "up-stream" intersections.	> 1.000

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Impact Threshold Criteria

According to City guidelines, an intersection operating at a LOS D or better is considered to be operating satisfactory. At signalized locations, an impact occurs if the operating conditions worsen from LOS D or better to LOS E or F after the addition of traffic generated by a project. If the intersection is operating at LOS E or F in the without-project conditions, an impact occurs if the V/C ratio increases by 0.02 or more after the addition of traffic generated by a project. At unsignalized locations, an impact occurs if the operating conditions worsen from LOS D or better to LOS E or F after the addition of traffic generated by the project, and the traffic signal warrant analysis determines that a traffic signal is warranted. For the purposes of this analysis, the Eight Hour, Four Hour, and Peak Hour signal warrants were prepared.

According to the Caltrans guidelines, it is recommended that the Lead Agency consult Caltrans to determine the appropriate target LOS for a Caltrans intersection. For this analysis, LOS D was considered to be the target LOS (as the City accepts LOS D as a satisfactory operating condition) and will be utilized to determine whether the addition of the traffic generated by the proposed project causes an impact at intersections under Caltrans' jurisdiction.

Queuing

The 95th percentile queues at the freeway ramps were reviewed to analyze whether the addition of the proposed project traffic would cause queuing to extend back to the freeway mainline. The 95th percentile queue lengths represent the theoretical "maximum" queue that would form at the off-ramp.

Signal Warrants

A traffic signal warrant analysis was conducted at Driveways 1 and 2 on Redondo Avenue and any unsignalized study intersection where the addition of the proposed project traffic would worsen the operating conditions from LOS D or better to LOS E or F. Traffic signal warrants are standards presented in the California Manual on Uniform Traffic Control Devices (CA MUTCD) that provide guidelines in the determination of the need for a traffic signal. A traffic signal should not be installed if no warrants are met, since the installation of traffic signals may increase delays for the majority of through traffic and may increase the potential for accidents. Similarly, the satisfaction of traffic signal warrants shall not in itself require the installation of a traffic control signal. The following warrants were analysis for the purposes of this analysis:

- Warrant 1, Eight-Hour Vehicular Volume;
- Warrant 2, Four-Hour Vehicular Volume; and,
- Warrant 3, Peak Hour Vehicular Volume.

EXISTING ROADWAY NETWORK

The existing roadway network in the project vicinity is comprised of the following street system:

- *Spring Street* is a designated Major Avenue in the Mobility Element of the City's General Plan. It is located north of the proposed project site and travels in the east-west direction. West of Temple Avenue and east of Redondo Avenue in the vicinity of the proposed project site, it generally consists of four travel lanes (two in each direction). Between Temple Avenue and Redondo Avenue, it consists of six travel lanes (three in each direction).

- *Willow Street* is a designated Boulevard in the Mobility Element of the City's General Plan. It is located north of the proposed project site and travels in the east-west direction. West of Temple Avenue and east of Redondo Avenue in the vicinity of the proposed project site, it generally consists of four travel lanes (two in each direction). Between Temple Avenue and Redondo Avenue, it consists of six travel lanes (three in each direction). In the proposed project area, it generally consists of six travel lanes (three in each direction).

- *Burnett Street* is not designated in the Mobility Element of the City's General Plan. It is located adjacent to the north side of the proposed project site and travels in the west-east direction. It consists of two travel lanes (one in each direction).

- *Industry Drive* is not designated in the Mobility Element of the City's General Plan. It aligns with the southern proposed project driveway on Redondo Avenue and serves as a connection to the industrial development across the street from the proposed project. It consists of two travel lanes (one in each direction).

- *Hill Street* is a designated Neighborhood Connector in the Mobility Element of the City's General Plan. It is located south of the proposed project site and travels in the east-west direction. In the vicinity of the proposed project site, it generally consists of two travel lanes (one in each direction).

- *Stearns Street* is a designated Neighborhood Connector between Redondo Avenue and Clark Avenue/Los Coyotes Diagonal and a designated Minor Avenue east of Clark Avenue/Los Coyotes Diagonal in the Mobility Element of the City's General Plan. It is located south of the proposed project site and travels in the east-west direction. Between Redondo Avenue and Clark Avenue/Los Coyotes Diagonal in the vicinity of the proposed project site, it generally consists of two travel lanes (one in each direction). East of Clark Avenue/Los Coyotes Diagonal, it consists of four travel lanes (two in each direction).

- *State Route 1 – Pacific Coast Highway (PCH)* is a designated Regional Corridor in the Mobility Element of the City's General Plan. It is located south of the proposed project site and travels in the east-west direction in the proposed project area (transitions to north-south direction in other areas). In the vicinity of the proposed project site, it generally consists of six travel lanes (three in each direction).

- *Cherry Avenue* is a designated Major Avenue in the Mobility Element of the City's General Plan. It is located west of the proposed project site and travels in the north-south direction. North of Spring Street and south of Crescent Heights Streets, it generally consists of four travel lanes (two in each direction). Between Spring Street and Crescent Heights Streets, it consists of six travel lanes (three in each direction).

- *Temple Avenue* is a designated Neighborhood Collector in the Mobility Element of the City's General Plan. It is located west of the proposed project site and travels in the north-south direction. It generally consists of four travel lanes (two in each direction).

- *Redondo Avenue* is a designated Major Avenue in the Mobility Element of the City's General Plan. It is located immediately adjacent to the west side of the proposed project site and travels in the north-south. Adjacent to the proposed project site, south of Burnett Street, it consists of four travel lanes (two in each direction). Between Willow Street and Burnett Street, it consists of six travel lanes (three in each direction). Between Spring Street and Willow Street, it consists of five travel lanes (three in the northbound direction and two in the southbound direction).

- *Grand Avenue* is not designated in the Mobility Element of the City's General Plan. It is located east of the proposed project site and travels in the north-south direction. It consists of two travel lanes (one in each direction).

- *Lakewood Boulevard* is a designated Regional Corridor in the Mobility Element of the City's General Plan. It is located east of the proposed project site and travels in the north-south direction with a speed limit of 40 miles per hour. South of Spring Street and north of Conant Street in the vicinity of the proposed project site, it generally consists of six travel lanes (three in each direction). Between Conant Street and Spring Street, it consists of eight travel lanes (four in each direction).

EXISTING TRAFFIC VOLUMES

The existing operations of the study intersections were assessed for the weekday AM and PM peak hours. Existing traffic volume data was collected on Wednesday, September 23, 2017, which represents a typical weekday with local schools and colleges in session. Data was collected between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM. The peak hour volumes utilized in this analysis, represent the highest hour during the weekday AM and PM data collection periods.

EXISTING INTERSECTION LEVELS OF SERVICE

Intersection turning movement volumes, lane configurations, and traffic control were used to calculate the levels of service at the study intersections for the weekday AM and PM peak hours. Table 4.16-4, *Intersection LOS – Existing Conditions*, shows the LOS results based on the V/C ratios or delay for the study intersections under Existing Conditions. As shown in Table 4.16-4, all intersections currently operate at or better than the LOS D standard set forth by the City except for the following locations, which operate at LOS E or F during the weekday AM or PM peak hour:

- Intersection No. 5 – Redondo Avenue/Industry Drive (LOS E during the PM peak hour);
- Intersection No. 8 – Redondo Avenue/PCH (LOS E during the AM peak hour);
- Intersection No. 11 – Lakewood Boulevard/Willow Street (LOS F during the AM peak hour and LOS E during the PM peak hour); and,
- Intersection No. 15 – Cherry Avenue/Willow Street (LOS E during the PM peak hour).

Table 4.16-4
Intersection LOS – Existing Conditions

No.	Intersection	Control	Peak Hour	Existing		
				V/C	Delay (s/veh)	LOS
1	Redondo Avenue/Spring Street	Signalized	AM	0.749		C
			PM	0.836		D
2	Redondo Avenue/Willow Street	Signalized	AM	0.806		D
			PM	0.867		D
3	Redondo Avenue/Burnett Street	Signalized	AM	0.689		B
			PM	0.601		B
4	Redondo Avenue/Project Driveway	TWSC	AM		27.9	D
			PM		17.5	C
5	Redondo Avenue/ Industry Drive-Project Driveway	TWSC	AM		32.2	D
			PM		**47.2**	**E**
6	Redondo Avenue/Hill Street	Signalized	AM	0.734		C
			PM	0.784		C
7	Redondo Avenue/Stearns Street	Signalized	AM	0.758		C
			PM	0.721		C
8	Redondo Avenue/PCH	Signalized	**AM**		**56.3**	**E**
			PM		48.0	D
9	Grand Avenue/Willow Street	Signalized	AM	0.648		B
			PM	0.757		C
10	Grand Avenue/Burnett Street	TWSC	AM		9.0	A
			PM		9.4	A
11	Lakewood Boulevard/Willow Street	Signalized	**AM**	**1.093**		**F**
			PM	**0.999**		**E**
12	Temple Avenue/Spring Street	Signalized	AM	0.685		B
			PM	0.719		C

Table 4.16-4 [continued]
Intersection LOS – Existing Conditions

No.	Intersection	Control	Peak Hour	Existing		
				V/C	Delay (s/veh)	LOS
13	Temple Avenue/ I-405 Northbound Off-ramps	Signalized	AM		8.9	A
			PM		10.8	B
14	Temple Avenue/Willow Street	Signalized	AM	0.663		B
			PM	0.787		C
15	Cherry Avenue/Willow Street	Signalized	AM	0.862		D
			PM	**0.932**		**E**
16	I-405 Southbound Off-ramps/ Spring Street	Signalized	AM		19.8	B
			PM		10.0	A

Notes:
LOS – Level of Service
Signalized – Signal Controlled Intersection (LOS based on V/C ratios)
TWSC – Two-Way Stop Controlled (LOS based on highest delay approach)
BOLD – Intersection operating at LOS E or F

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

EXISTING QUEUING AT FREEWAY RAMPS

The 95th percentile queues at the freeway ramps were reviewed to analyze whether queuing extends back to the freeway mainline. The 95th percentile queuing at the freeway ramps (Intersections 13 and 16) for Existing Conditions are presented in Table 4.16-5, *95th Percentile Queuing at Freeway Ramps – Existing Conditions*. As shown in Table 4.16-5, queuing does not back up to the freeway mainline segments at either of the two freeway ramps under the Existing Conditions.

Table 4.16-5
95th Percentile Queuing at Freeway Ramps – Existing Conditions

No.	Intersection	Peak Hour	Ramp Storage Space (ft)	Existing	
				Ramp Left-turn Lane	Ramp Right-turn Lane
13	Temple Avenue/ I-405 Northbound Off-ramps	AM	740	80	40
		PM		140	40
16	I-405 Southbound Off-ramps/ Spring Street	AM	860	250	210
		PM		100	50

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

a) 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?

Less Than Significant Impact With Mitigation Incorporated.

Project Trip Generation

The number of trips expected to be generated by the proposed project were estimated using rates published in the Institute of Transportation Engineer's (ITE) Trip Generation Manual. These rates are provided as both daily rates and AM and PM peak hour rates. Overall, the rates relate the number of vehicle trips traveling to and from the project site to the size of development of each land use.

Based on communication with City staff, the Manufacturing land-use rates (ITE Code 140) were applied to determine the number of trips generated by the proposed project. To account for the trucks expected to be generated by the proposed project, it was estimated that 20 percent of the trips would be truck trips, based on recent studies in the area and truck rates presented in the ITE Trip Generation Manual. A passenger car equivalent (PCE) factor of 2.0 was applied to the expected number of truck trips to convert them into automobile trips.

As shown in Table 4.16-6, *Project Trip Generation*, the proposed project is expected to generate 1,966 trips on a weekday daily basis, including 374 trips in the AM peak hour (330 inbound and 44 outbound) and 382 trips in the PM peak hour (46 inbound and 336 outbound).

Table 4.16-6
Project Trip Generation

Land Use	GLA	Units	Daily	AM			PM		
				In	Out	Total	In	Out	Total
Manufacturing (ITE Code 140)	427,565	sf	1,638	275	37	312	38	280	318
(1) Estimated Number of Passenger Vehicles (80% of total trips)			1,310	220	30	250	30	224	254
Estimated Number of Trucks (20% of total trips)			328	55	7	62	8	56	64
(2) Trucks Adjusted to Passenger Vehicles (assumed PCE 2.0)			656	110	110	124	16	112	128
(1)+(2) TOTAL			1,966	330	330	374	46	336	382

Notes:
ITE Rates Used:
Daily – Trips calculated by formula T = 3.88(X) – 20.70
AM – 0.73 trips per 1,000 sf
PM – Trips calculated by formula T = 0.78(X) – 15.97
GLA – Gross Leasable Area
sf – Square feet

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Existing Plus Project Conditions

This section analyzes traffic conditions associated with the addition of trips forecast to be generated by the proposed project on the existing roadway network.

Existing Plus Project Conditions Traffic Volumes

The weekday AM and PM peak hour traffic volumes generated by the proposed project were added to the Existing AM and PM peak hour traffic volumes. Figure 7, *Existing Plus Project Traffic Volumes, Lane Configurations, and Traffic Control Devices* (provided in Appendix D) shows Existing Plus Project Conditions after addition of the proposed project traffic to the Existing Conditions.

Existing Plus Project Intersection Level of Service

Existing lane configurations and traffic controls were used along with the Existing Plus Project traffic volumes to calculate the levels of service at the study intersections for the weekday AM and PM peak hours.

Table 4.16-7, *Intersection LOS – Existing Plus Project Conditions*, shows the LOS results based on the V/C ratios or delay for the study intersections for Existing Plus Project Conditions. As shown in Table 4.16-7, all intersections continue to operate at or better than the LOS D standard set forth by the City except for the following locations, which operate at LOS E or F during the weekday AM or PM peak hour after the addition of the proposed project traffic:

- Intersection No. 2 – Redondo Avenue/Willow Street (LOS E during both peak hours);
- Intersection No. 5 – Redondo Avenue/Industry Drive-Project Driveway (LOS E during AM peak hour and LOS F during the PM peak hour);
- Intersection No. 8 – Redondo Avenue/PCH during (LOS E during the AM peak hour);
- Intersection No. 11 – Lakewood Boulevard/Willow Street (LOS F during both peak hours); and,
- Intersection No. 15 – Cherry Avenue/Willow Street (LOS E during the PM peak hour).

Based on the impact threshold criteria presented in the methodology section above, the addition of the proposed project traffic results in an impact at the following locations:

- Intersection No. 2 – Redondo Avenue/Willow Street (LOS D worsens to LOS E during the PM peak hour);
- Intersection No. 5 – Redondo Avenue/Industry Drive-Project Driveway (LOS D worsens to LOS E during the AM peak hour and LOS E worsens to LOS F and signal warrants are met during the PM peak hour); and
- Intersection No. 11 – Lakewood Boulevard/Willow Street (V/C ratio increases by 0.02 or more during both peak hours).

One or more signal warrants are satisfied at Intersection No. 5 during the PM peak hour. An impact does not occur at Intersection No. 8 as there is no change in the LOS grade after the addition of the proposed project traffic. An impact does not occur at Intersection No. 15 as the increase in V/C caused by the addition of the proposed project traffic is below the City's threshold of 0.02.

As shown in Table 4.16-7, Redondo Avenue/Willow Street (Intersection No. 2) would operate at a LOS E during PM peak hour conditions for Existing Plus Project Conditions without mitigation. Implementation of Mitigation Measure TR-1 would require modification to signal timing at the Redondo Avenue/Willow Street intersection. A signal timing study would be required to confirm the optimal cycle length. Implementation of Mitigation Measure TR-1 would reduce impacts to a less than significant level; refer to Table 4.16-8, *Intersection LOS – Existing Plus Project With Mitigation Conditions*.

The Redondo Avenue/Industry Drive intersection (Intersection No. 5) would operate at a LOS E during the AM peak hour and LOS F and signal warrants are met during the PM peak hour conditions for Existing Plus Project Conditions. Mitigation Measure TR-2 would require the installation of a two-phase traffic signal at the Redondo Avenue/Industry Drive intersection. A signal timing study would be conducted before installation of the signal. The existing two-way left-turn lane in the southbound direction would be converted into a left-turn lane, but no additional right-of-way would be required to implement the installation of a signal. With implementation of Mitigation Measure TR-2, impacts would be reduced to a less than significant level; refer to Table 4.16-8.

Table 4.16-7
Intersection LOS – Existing Plus Project Conditions

No.	Intersection	Control	Peak Hour	Existing			Existing Plus Project		
				V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
1	Redondo Avenue/Spring Street	Signalized	AM	0.749		C	0.775		C
			PM	0.836		D	0.859		D
2	Redondo Avenue/Willow Street	Signalized	AM	0.806		D	0.789		C
			PM	**0.867**		**D**	**0.935**		**E**
3	Redondo Avenue/Burnett Street	Signalized	AM	0.689		B	0.758		C
			PM	0.601		B	0.690		B
4	Redondo Avenue/Project Driveway	TWSC	AM		27.9	D		21.9	C
			PM		17.5	C		23.6	D
5	Redondo Avenue/ Industry Drive-Project Driveway	TWSC	**AM**		**32.2**	**D**		**39.9**	**E**
			PM		**47.2**	**E**		**58.1**	**F**
6	Redondo Avenue/Hill Street	Signalized	AM	0.734		C	0.755		C
			PM	0.784		C	0.806		D
7	Redondo Avenue/Stearns Street	Signalized	AM	0.758		C	0.779		C
			PM	0.721		C	0.730		C
8	Redondo Avenue/PCH	Signalized	**AM**		**56.3**	**E**		**62.2**	**E**
			PM		48.0	D		49.3	D
9	Grand Avenue/Willow Street	Signalized	AM	0.648		B	0.667		B
			PM	0.757		C	0.784		C
10	Grand Avenue/Burnett Street	TWSC	AM		9.0	A		9.0	A
			PM		9.4	A		9.5	A
11	Lakewood Boulevard/Willow Street	Signalized	**AM**	**1.093**		**F**	**1.118**		**F**
			PM	**0.999**		**E**	**1.020**		**F**
12	Temple Avenue/Spring Street	Signalized	AM	0.685		B	0.688		B
			PM	0.719		C	0.731		C
13	Temple Avenue/ I-405 Northbound Off-ramps	Signalized	AM		8.9	A		9.3	A
			PM		10.8	B		10.9	B
14	Temple Avenue/Willow Street	Signalized	AM	0.663		B	0.689		B
			PM	0.787		C	0.789		C
15	Cherry Avenue/Willow Street	Signalized	AM	0.862		D	0.864		D
			PM	**0.932**		**E**	**0.933**		**E**
16	I-405 Southbound Off-ramps/ Spring Street	Signalized	AM		19.8	B		20.1	C
			PM		10.0	A		10.0	A

Notes:
LOS – Level of Service
Signalized – Signal Controlled Intersection (LOS based on V/C ratios)
TWSC – Two-Way Stop Controlled (LOS based on highest delay approach)
BOLD – Intersection operating at LOS E or F
BOLD and Shaded – Significantly Impacted Intersections

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Table 4.16-8
Intersection LOS – Existing Plus Project With Mitigation Conditions

No.	Intersection	Peak Hour	Existing			Existing Plus Project With Mitigation		
			V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
2	Redondo Avenue/ Willow Street	AM	0.806		D	0.739		C
		PM	0.867		D	0.885		D
5	Redondo Avenue/ Industry Drive-Project Driveway	AM		32.2	D		4.8	A
		PM		**47.2**	**E**		7.4	A
11	Lakewood Boulevard/ Willow Street	**AM**	**1.093**		**F**	**1.107**		**F**
		PM	**0.999**		**E**	**1.009**		**F**

Notes:
LOS – Level of Service
BOLD – Intersection operating at LOS E or F
Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

At the Lakewood Boulevard/Willow Street intersection (Intersection No. 11) V/C ratio increases by 0.02 or more during both peak hours without mitigation. Implementation of Mitigation Measure TR-3 would require modification to signal timing at the Lakewood Boulevard/Willow Street intersection. A signal timing study would be required to confirm the optimal cycle length. Implementation of Mitigation Measure TR-3 would reduce impacts to a less than significant level; refer to Table 4.16-8.

Existing Plus Project Signal Warrant Analysis

At the two unsignalized study intersections, a signal warrant assessment was conducted to determine if traffic signals would be warranted due to the volume of traffic at the intersections. The results of the signal warrant analysis for the Existing Plus Project Conditions are presented in Table 4.16-9, *Signal Warrant Analysis – Existing Plus Project Conditions*. As shown, all three signal warrants are met for both driveways on Redondo Avenue (Intersections No. 4 and No. 5). Although the signal warrants are met at Intersection 4 (Driveway 2), the intersection would operate at an acceptable LOS as a two-way stop controlled intersection after the addition of the proposed project traffic. As such, a signal is not proposed at this location. As discussed above, a signal is recommended at Intersection No. 5 to reduce impacts to a less than significant level (Mitigation Measure TR-2).

Table 4.16-9
Signal Warrant Analysis – Existing Plus Project Conditions

No.	Intersection	Peak Hour	Eight-Hour Met?	Four-Hour Met?	Peak Hour Met?
4	Redondo Avenue/ Project Driveway	AM	No	No	No
		PM	Yes	Yes	Yes
5	Redondo Avenue/ Industry Drive-Project Driveway	AM	No	No	No
		PM	Yes	Yes	Yes

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Existing Plus Project Queuing at Freeway Ramps

The 95th percentile queues at the freeway ramps were reviewed to analyze whether the addition of the proposed project traffic would cause queuing to extend back to the freeway mainline. The 95th percentile queuing at the freeway ramps (Intersections 13 and 16) for Existing Plus Project Conditions is presented in Table 4.16-10, *95th Percentile Queuing at Freeway Ramps – Existing Plus Project Conditions*. Similar to Existing Conditions, queuing would increase by a maximum of 20 feet and would not back up to the freeway mainline segments at either of the two freeway ramps during the Existing Plus Project Conditions. Thus, less than significant impacts would result in this regard.

Table 4.16-10
95th Percentile Queuing at Freeway Ramps – Existing Plus Project Conditions

No.	Intersection	Peak Hour	Ramp Storage Space (ft)	Queuing (ft)	
				Ramp Left-turn Lane	Ramp Right-turn Lane
13	Temple Avenue/ I-405 Northbound Off-ramps	AM	740	90	40
		PM		140	40
16	I-405 Southbound Off-ramps/ Spring Street	AM	860	270	210
		PM		110	50

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Cumulative (2019) Conditions

The Cumulative (Year 2019) Conditions analysis forecasts how the project area's transportation system would operate with the full build-out of the proposed project in combination with the growth and changes of the surrounding community by the year 2019. To derive the Cumulative (Year 2019) baseline traffic forecast volumes, approved and pending projects in the vicinity of the proposed project site were considered.

Expected Transportation Improvements

Based on communication with City staff, no roadway improvements or changes are expected to be implemented by the year 2019 in the project vicinity. According to the City's Bicycle Master Plan, no improvements or changes are expected to be implemented to the bicycle facilities in the project area by the year 2019. The addition of bicycle facilities are proposed in the long-term on Lakewood Boulevard and Willow Street in the project area; however, these projects have not been funded or designed and thus were not considered in this analysis.

Traffic Volume Forecasting

Based on information provided by the City staff, the only approved/pending project proposed for the project area is the 125 guestroom Staybridge Suites Hotel project proposed for the northeast corner of the intersection of Lakewood Boulevard/Redondo Avenue. Per direction from the City staff, a 1 percent per year growth rate was applied to the Existing traffic volumes to account for the traffic expected to be generated by the future Staybridge Suites Hotel and other projects that may be proposed between now and the completion of the proposed project in year 2019. Figure 8, *Cumulative (Year 2019) Traffic Volumes, Lane Configurations, and Traffic Control Devices* (provided in Appendix D) shows the 1 percent per year growth rate applied to the Existing counts results in the Cumulative (2019) Conditions traffic volumes.

Cumulative (2019) Intersection Level of Service

The Cumulative (2019) Conditions traffic counts were added to the existing street network to calculate the LOS at the study intersections for the weekday AM and PM peak hours; refer to Figure 9, *Cumulative (Year 2019) Plus Project Traffic Volumes, Lane Configurations, and Traffic Control Devices* (provided in Appendix D). Table 4.16-11, *Intersection LOS – Cumulative (2019) Conditions*, shows the LOS results based on the V/C ratios or delay for the study intersections for Cumulative (2019) Conditions. As shown in Table 4.16-11, all intersections operate at or better than the LOS D standard set forth by the City except for the following locations, which operate at LOS E or F during the AM or PM peak hour:

- Intersection No. 5 – Redondo Avenue/Industry Drive (LOS F during the PM peak hour);
- Intersection No. 8 – Redondo Avenue/PCH (LOS E during the AM peak hour);
- Intersection No. 11 – Lakewood Boulevard/Willow Street (LOS F during both peak hours); and,
- Intersection No. 15 – Cherry Avenue/Willow Street (LOS E during the PM peak hour).

Table 4.16-11
Intersection LOS – Cumulative (2019) Conditions

No.	Intersection	Control	Peak Hour	Cumulative (2019)		
				V/C	Delay (s/veh)	LOS
1	Redondo Avenue/Spring Street	Signalized	AM	0.761		C
			PM	0.849		D
2	Redondo Avenue/Willow Street	Signalized	AM	0.818		D
			PM	0.882		D
3	Redondo Avenue/Burnett Street	Signalized	AM	0.701		C
			PM	0.610		B
4	Redondo Avenue/Project Driveway	TWSC	AM		28.9	D
			PM		17.9	C
5	Redondo Avenue/ Industry Drive-Project Driveway	TWSC	AM		33.4	D
			PM		**52.1**	**F**
6	Redondo Avenue/Hill Street	Signalized	AM	0.746		C
			PM	0.797		C
7	Redondo Avenue/Stearns Street	Signalized	AM	0.770		C
			PM	0.734		C
8	Redondo Avenue/PCH	Signalized	**AM**		**60.7**	**E**
			PM		50.2	D
9	Grand Avenue/Willow Street	Signalized	AM	0.658		B
			PM	0.769		C
10	Grand Avenue/Burnett Street	TWSC	AM		9.0	A
			PM		9.4	A
11	Lakewood Boulevard/Willow Street	Signalized	**AM**	**1.112**		**F**
			PM	**1.017**		**F**
12	Temple Avenue/Spring Street	Signalized	AM	0.696		B
			PM	0.730		C
13	Temple Avenue/I-405 Northbound Off-ramps	Signalized	AM		9.0	A
			PM		11.0	B
14	Temple Avenue/Willow Street	Signalized	AM	0.673		B
			PM	0.800		D
15	Cherry Avenue/Willow Street	Signalized	AM	0.876		D
			PM	**0.947**		**E**
16	I-405 Southbound Off-ramps/ Spring Street	Signalized	AM		20.2	C
			PM		10.0	B

Notes:
LOS – Level of Service
Signalized – Signal Controlled Intersection (LOS based on V/C ratios)
TWSC – Two-Way Stop Controlled (LOS based on highest delay approach)
BOLD – Intersection operating at LOS E or F

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Cumulative (2019) Queuing at Freeway Ramps

The 95th percentile queuing at the freeway ramps (Intersections 13 and 16) for Cumulative (2019) Conditions is presented in Table 4.16-12, *95th Percentile Queuing at Freeway Ramps – Cumulative (2019) Conditions*. As shown in Table 4.16-12, queuing would not back up to the freeway mainline segments at either of the two freeway ramps during the Cumulative (2019) Conditions. Thus, less than significant impacts would result in this regard.

Table 4.16-12
95th Percentile Queuing at Freeway Ramps – Cumulative (2019) Conditions

No.	Intersection	Peak Hour	Ramp Storage Space (ft)	Queuing (ft)	
				Ramp Left-turn Lane	Ramp Right-turn Lane
13	Temple Avenue/ I-405 Northbound Off-ramps	AM	740	80	40
		PM		140	40
16	I-405 Southbound Off-ramps/ Spring Street	AM	860	260	220
		PM		110	50

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Cumulative (2019) Plus Project Conditions

This section describes intersection operating conditions associated with the addition of the proposed project traffic to the Cumulative (2019) Conditions.

Cumulative (2019) Plus Project Traffic Volumes

The weekday AM and PM peak hour traffic volumes generated by the proposed project (as shown in Figure 6 in Appendix D) were added to the Cumulative (2019) Conditions AM and PM peak hour traffic volumes (as shown in Figure 8 in Appendix D). The resulting volumes are illustrated in Figure 9 (provided in Appendix D) and represent Cumulative (2019) Plus Project Conditions after addition of the proposed project traffic to the Cumulative (2019) Conditions.

Cumulative (2019) Plus Project Intersection Level of Service

The Cumulative (2019) Plus Project traffic volumes were added to the existing street network to calculate the LOS at the study intersections for the AM and PM peak hours.

Table 4.16-13, *Intersection LOS – Cumulative (2019) Plus Project Conditions*, shows the LOS results based on the V/C ratios or delay for the study intersections for Cumulative (2019) Plus Project Conditions. As shown in Table 4.16-13, all intersections continue to operate at or better than the LOS D standard set forth by the City except for the following locations, which operate at LOS E or F during the AM or PM peak hour after the addition of the proposed project traffic:

- Intersection No. 2 – Redondo Avenue/Willow Street (LOS E during the PM peak hour);
- Intersection No. 5 – Redondo Avenue/Industry Drive (LOS E during the AM peak hour and LOS F during the PM peak hour);
- Intersection No. 8 – Redondo Avenue/PCH (LOS E during the AM peak hour);
- Intersection No. 11 – Lakewood Boulevard/Willow Street (LOS F during both peak hours);
- Intersection No. 15 – Cherry Avenue/Willow Street (LOS E during the PM peak hours).

Based on the impact threshold criteria presented in the methodology section above, the addition of the proposed project traffic results in an impact at the following locations:

- Intersection No. 2 – Redondo Avenue/Willow Street (LOS D worsens to LOS E during the PM peak hour);
- Intersection No. 5 – Redondo Avenue/Industry Drive (LOS D worsens to LOS E during the AM peak hour and signal warrants are met with the intersection operating at LOS F during the PM peak hour); and,
- Intersection No. 11 – Lakewood Boulevard/Willow Street (V/C ratio increases by 0.02 or more during both peak hours).

An impact does not occur at Intersection No. 8 as there is no change in the LOS grade after the addition of the proposed project traffic. An impact does not occur at Intersection No. 15 as the increase in V/C caused by the addition of the proposed project traffic is below the City's threshold of 0.02.

Table 4.16-13
Intersection LOS – Cumulative (2019) Plus Project Conditions

No.	Intersection	Control	Peak Hour	Cumulative (2019)			Cumulative (2019) Plus Project		
				V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
1	Redondo Avenue/Spring Street	Signalized	AM	0.761		C	0.778		C
			PM	0.849		D	0.873		D
2	Redondo Avenue/Willow Street	Signalized	AM	0.818		D	0.801		D
			PM	**0.882**		**D**	**0.949**		**E**
3	Redondo Avenue/Burnett Street	Signalized	AM	0.701		C	0.769		C
			PM	0.610		B	0.698		B
4	Redondo Avenue/Project Driveway	TWSC	AM		28.9	D		22.5	C
			PM		17.9	C		24.3	C
5	Redondo Avenue/ Industry Drive-Project Driveway	TWSC	**AM**		**33.4**	**D**		**42.0**	**E**
			PM		**52.1**	**F**		**64.9**	**F**
6	Redondo Avenue/Hill Street	Signalized	AM	0.746		C	0.767		C
			PM	0.797		C	0.819		D
7	Redondo Avenue/Stearns Street	Signalized	AM	0.770		C	0.791		C
			PM	0.734		C	0.742		C
8	Redondo Avenue/PCH	Signalized	**AM**		**60.7**	**E**		**66.5**	**E**
			PM		50.2	D		51.5	D
9	Grand Avenue/Willow Street	Signalized	AM	0.658		B	0.676		B
			PM	0.769		C	0.797		C
10	Grand Avenue/Burnett Street	TWSC	AM		9.0	A		9.0	A
			PM		9.4	A		9.6	A
11	Lakewood Boulevard/Willow Street	Signalized	**AM**	**1.112**		**F**	**1.138**		**F**
			PM	**1.017**		**F**	**1.037**		**F**
12	Temple Avenue/Spring Street	Signalized	AM	0.696		B	0.699		B
			PM	0.730		C	0.741		C
13	Temple Avenue/I-405 Northbound Off-ramps	Signalized	AM		9.0	A		9.4	A
			PM		11.0	B		11.1	B
14	Temple Avenue/Willow Street	Signalized	AM	0.673		B	0.700		B
			PM	0.800		D	0.802		D
15	Cherry Avenue/Willow Street	Signalized	AM	0.876		D	0.877		D
			PM	**0.947**		**E**	**0.949**		**E**
16	I-405 Southbound Off-ramps/ Spring Street	Signalized	AM		20.2	C		20.5	C
			PM		10.0	B		10.1	B

Notes:
LOS – Level of Service
Signalized – Signal Controlled Intersection (LOS based on V/C ratios)
TWSC – Two-Way Stop Controlled (LOS based on highest delay approach)
BOLD – Intersection operating at LOS E or F
BOLD and Shaded – Significantly Impacted Intersections

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

As shown in Table 4.16-13, Redondo Avenue/Willow Street (Intersection No. 2) would operate at a LOS E during PM peak hour conditions for Cumulative (2019) Plus Project Conditions without mitigation. Implementation of Mitigation Measure TR-1 would require modification to signal timing at the Redondo Avenue/Willow Street intersection. A signal timing study would be required to confirm the optimal cycle length. Implementation of Mitigation Measure TR-1 would reduce impacts to a less than significant level; refer to Table 4.16-14, *Intersection LOS – Cumulative (2019) Plus Project With Mitigation Conditions*.

Table 4.16-14
Intersection LOS – Cumulative (2019) Plus Project With Mitigation Conditions

No.	Intersection	Peak Hour	Cumulative (2019)			Cumulative (2019) Plus Project With Mitigation		
			V/C	Delay (s/veh)	LOS	V/C	Delay (s/veh)	LOS
2	Redondo Avenue/ Willow Street	AM	0.818		D	0.751		C
		PM	0.882		D	0.899		D
5	Redondo Avenue/ Industry Drive-Project Driveway	AM		33.4	D		5.0	A
		PM		**52.1**	**F**		7.5	A
11	Lakewood Boulevard/ Willow Street	**AM**	**1.112**		**F**	**1.126**		**F**
		PM	**1.017**		**F**	**1.026**		**F**

Notes:
LOS – Level of Service
BOLD – Intersection operating at LOS E or F
Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

The Redondo Avenue/Industry Drive intersection (Intersection No. 5) would operate at a LOS E during the AM peak hour and LOS F and signal warrants are met during the PM peak hour conditions for Cumulative (2019) Plus Project Conditions. Mitigation Measure TR-2 would require the installation of a two-phase traffic signal at the Redondo Avenue/Industry Drive intersection. A signal timing study would be conducted before installation of the signal. The existing two-way left-turn lane in the southbound direction would be converted into a left-turn lane, but no additional right-of-way would be required to implement the installation of a signal. With implementation of Mitigation Measure TR-2, impacts would be reduced to a less than significant level; refer to Table 4.16-14.

At the Lakewood Boulevard/Willow Street intersection (Intersection No. 11) V/C ratio increases by 0.02 or more during both peak hours without mitigation. Implementation of Mitigation Measure TR-3 would require modification to signal timing at the Lakewood Boulevard/Willow Street intersection. A signal timing study would be required to confirm the optimal cycle length. Implementation of Mitigation Measure TR-3 would reduce impacts to a less than significant level; refer to Table 4.16-14.

Cumulative (2019) Plus Project Signal Warrant Analysis

At the two unsignalized study intersections, a signal warrant assessment was conducted to determine if traffic signals would be warranted due to the volume of traffic at the intersections. The results of the signal warrant analysis for the Cumulative (2019) Plus Project Conditions are shown in Table 4.16-15, *Signal Warrant Analysis – Cumulative (2019) Plus Project Conditions*. As shown in Table 4.16-15, all three signal warrants are met for both driveways on Redondo Avenue (Intersections No. 4 and No. 5) during the PM peak hour. Although the signal warrants are met at Intersection 4, the intersection would operate at an acceptable LOS as a two-way stop controlled intersection after the addition of the proposed Project traffic. As such, a signal is not proposed at this location. A signal is recommended at Intersection No. 5 to reduce impacts to a less than significant level (Mitigation Measure TR-2).

Table 4.16-15
Signal Warrant Analysis – Cumulative (2019) Plus Project Conditions

No.	Intersection	Peak Hour	Eight-Hour Met?	Four-Hour Met?	Peak Hour Met?
4	Redondo Avenue/ Project Driveway	AM	No	No	No
		PM	Yes	Yes	Yes
5	Redondo Avenue/ Industry Drive-Project Driveway	AM	No	No	No
		PM	Yes	Yes	Yes

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Cumulative (2019) Plus Project Queuing at Freeway Ramps

The 95th percentile queuing at the freeway ramps (Intersections 13 and 16) for Cumulative (2019) Plus Project Conditions is presented in Table 4.16-16, *95th Percentile Queuing at Freeway Ramps – Cumulative (2019) Plus Project Conditions*. Similar to Cumulative (2019) Conditions, queuing would increase by a maximum of 20 feet and would not back up to the freeway mainline segments at either of the two freeway ramps during the Cumulative (2019) Plus Project Conditions.

Table 4.16-16
95th Percentile Queuing at Freeway Ramps – Cumulative (2019) Plus Project Conditions

No.	Intersection	Peak Hour	Ramp Storage Space (ft)	Queuing (ft)	
				Ramp Left-turn Lane	Ramp Right-turn Lane
13	Temple Avenue/ I-405 Northbound Off-ramps	AM	740	90	40
		PM		140	40
16	I-405 Southbound Off-ramps/ Spring Street	AM	860	280	220
		PM		110	50

Source: Kittelson and Associates, *Transportation Impact Analysis 2300 Redondo Avenue*, November 2017.

Mitigation Measures:

TR-1 Prior to issuance of a Certificate of Occupancy, the signal timing at the Redondo Avenue/Willow Street intersection shall be modified to accommodate the traffic expected at this location. A signal timing study shall be prepared to confirm the optimal cycle length. The requirement for modification of signal timing and the associated signal timing study shall be denoted on project plans and specifications, subject to verification by the City of Long Beach City Engineer.

TR-2 Prior to issuance of a Certificate of Occupancy, a two-phase traffic signal at the Redondo Avenue/Industry Drive intersection shall be installed. The existing two-way left-turn lane in the southbound direction shall be converted into a left-turn lane. A signal timing study shall be prepared prior to the installation of the signal. The requirement for signal installation and the associated signal timing study shall be denoted on project plans and specifications, subject to verification by the City of Long Beach City Engineer.

TR-3 Prior to issuance of a Certificate of Occupancy, the signal timing at the Lakewood Boulevard/Willow Street intersection shall be modified to accommodate the traffic expected at this location. A signal timing study shall be prepared to confirm the optimal cycle length. The requirement for modification of signal timing and the associated signal timing study shall be denoted on project plans and specifications, subject to verification by the City of Long Beach City Engineer.

b) 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?

Less Than Significant Impact With Mitigation Incorporated. The *2010 Congestion Management Program* (CMP) prepared by the Los Angeles Metropolitan Transportation Authority (Metro) is intended to address the impact of local growth on the regional transportation system for Los Angeles County. The CMP was created to link local land use decisions with their impacts on regional transportation and air quality. One of the primary reasons for defining and monitoring a CMP highway and roadway system is to assess the overall performance of the highway system in Los Angeles County and track changes over time. The access to the project site is located along Redondo Avenue and East Burnett Street. Redondo Avenue and East Burnett Street are not designated as CMP roadways by Metro. Within the project vicinity, I-405 is designated "State Freeway," Pacific Coast Highway (PCH) is designated "State Highway," and Lakewood Boulevard is designated "Other Principal Arterial" within the 2010 CMP. The Transportation Impact Analysis analyzed 16 intersections, which include several CMP facilities: Intersection No. 8, Redondo Avenue/PCH; Intersection No. 11, Lakewood Boulevard/Willow Street; Intersection No. 13, Temple Avenue/I-405 Northbound Off-ramps; and Intersection No. 16, I-405 Southbound Off-ramps/Spring Street. As discussed in Response 4.16(a), of these intersections only Intersection No. 11 was found to be impacted with project implementation. However, Mitigation Measure TR-3 would require signal timing modifications at the Lakewood Boulevard/Willow Street intersection to accommodate the traffic expected at this location. A signal timing study would be required to confirm the optimal cycle length. With implementation of Mitigation Measure TR-3, impacts would be reduced to a less than significant level. As such, the proposed project would not result in any significant impacts at this CMP intersection.

Mitigation Measures: Refer to Mitigation Measure TR-3.

c) 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?

No Impact. The nearest airport to the project site is the Long Beach Airport, located approximately 0.65 miles north of the project site. Construction activities would be short-term in nature and cease upon completion. Operation of the proposed project includes office, manufacturing, and warehouse uses. Thus, construction and operation of the proposed project would not increase the frequency of air traffic or alter air traffic patterns. No impacts are anticipated in this regard.

Mitigation Measures: No mitigation is required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact With Mitigation Incorporated.

Long-Term Operational Impacts

Site access would be provided via two driveways on Redondo Avenue and four driveways on Burnett Street (referred to as Driveways 1 to 6). The driveways provide access to the proposed project site as follows:

- Driveway 1
  - Located on Redondo Avenue and aligned with Industry Drive
  - Access to Building 1 parking spaces and circulation aisles
  - Primary truck access to Building 1 loading areas

- Driveway 2
  - Located midblock between Burnett Street and Industry Drive on Redondo Avenue
  - Access to the entire site

- Driveway 3
  - Located on Burnett Street
  - Access to Building 2 parking spaces and circulation aisles

- Driveway 4
  - Located on Burnett Street
  - Access to Building 2 parking spaces and circulation aisles
  - Primary truck access to Building 2 loading areas

- Driveway 5
  - Located on Burnett Street
  - Access to Building 3 parking spaces and circulation aisles

- Driveway 6
  - Located on Burnett Street
  - Access to Building 3 parking spaces and circulation aisles
  - Primary truck access to Building 3 loading areas

The surface parking spaces and circulating aisles surround all three buildings. As currently proposed, all inbound movements on Redondo Avenue and Burnett Street would remain uncontrolled at the proposed project driveways. All outbound movements at the driveways would be stop controlled.

A review of the access points found that inbound vehicles making a right-turn into the proposed project site at any of the driveways are not expected to experience any queuing as these inbound movements would be uncontrolled internal to the proposed project site. Inbound vehicles making a left-turn into the proposed project site at either of the driveways are expected to experience minimal queuing. Any queuing that would occur for the outbound movements would occur on the proposed project site and would not affect City streets. Thus, less than significant impacts would result in this regard.

Construction Impacts

The project has the potential to result in safety hazards during the short-term construction process, since the project would include access improvements along Redondo Avenue. Although Redondo Avenue would remain open to traffic at all times, partial lane closures may be required in order to construct the widening improvements. During periods when partial lane closures are required, the construction contractor would be required to implement a temporary Traffic Management Plan (TMP) to minimize congestion and safety impacts during the construction process (Mitigation Measure TR-4). The TMP would meet City of Long Beach traffic control guidelines, and would include potential measures such as construction signage, measures for pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use, among others. The TMP would provide congestion relief during short-term construction activities and ensure safe travel. Thus, with implementation of Mitigation Measure TR-4, impacts would be less than significant.

Mitigation Measures:

TR-4 Prior to the initiation of construction, the City of Long Beach City Engineer shall ensure that a Traffic Management Plan (TMP) has been prepared for the proposed project. The TMP shall include measures

to minimize potential safety impacts during the short-term construction process, when partial lane closures may be required. It shall include measures such as construction signage, pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use. The TMP shall be incorporated into project specifications for verification prior to final plan approval.

e) Result in inadequate emergency access?

Less Than Significant Impact With Mitigation Incorporated. Refer to Response 4.8(g).

Mitigation Measures: Refer to Mitigation Measure HAZ-6 in Section 4.8, *Hazards and Hazardous Materials*, and TR-4 in Response 4.16(d).

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less Than Significant Impact With Mitigation Incorporated. The Long Beach Transit (LBT) provides transit service in the project vicinity. The following routes operate in the vicinity of the proposed project site:

- *LBT Route 131* extends from Seal Beach and provides connection to the Wardlow Metro Rail Blue Line station. Route 131 travels on Redondo Avenue in the vicinity of the proposed Project site. Bus stops for Route 131 are located on both sides of Redondo Avenue directly in front of the proposed Project site, at the corner of the intersection of Redondo Avenue/Burnett Street. During the weekday AM and PM commute period, Route 131 provides headways of approximately 45 minutes in the northbound and southbound direction.

- *LBT Route 111* extends from the Downtown Long Beach Metro Rail Blue Line Station to the Lakewood Regional Medical Center. Route 111 travels on Willow Street east of Redondo Avenue before turning on Redondo Avenue north of Willow Street in the vicinity of the proposed Project site. During the weekday AM and PM commute period, Route 111 provides headways of approximately 20 minutes in the northbound and southbound direction.

- *LBT Route 102/104* extends from the intersection of Santa Fe Avenue/25th Street to the Long Beach Civic Center. Route 102/104 travels on Willow Street in the vicinity of the proposed Project site. During the weekday AM commute period, Route 102/104 provides headways of approximately 30 minutes in the northbound and southbound direction. During the weekday PM commute period, Route 102/104 provides headways of approximately 40 minutes in the northbound and southbound direction.

Per the Mobility Plan of the City's General Plan, a Class III Bicycle Route/Sharrow facility is provided on Pacific Coast Highway, west of Lakewood Boulevard. No other bicycle facilities are provided in the immediate vicinity of the proposed project site.

The proposed project would not conflict with any policies related to alternative forms of transportation. The project site is located within an area comprised of a variety of uses including residential, commercial, and industrial uses. The project includes demolition of the existing USPS facility and construction of a warehouse/logistics facility. The project site is currently accessed along Redondo Avenue via four driveways and East Burnett Street via three driveways. All of the roadways in the project vicinity consist of sidewalks on both sides of the street, and all signalized intersections provide marked pedestrian crosswalks with pedestrian signals.

Project implementation would include driveway modifications and bus stop improvements. Improvements to the bus stops would include removal and replacement of the existing bus pad, a roof overhang for additional shelter, and architectural seating for bus patrons. Construction activities could temporarily impact the public transit and pedestrian facilities within the project vicinity. However, Mitigation Measure TRA-4 would require implementation of a TMP that

would include potential measures such as construction signage, measures for pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use, among others. Thus, with implementation of Mitigation Measure TR-4, impacts would be less than significant.

Mitigation Measures: Refer to Mitigation Measure TR-4.

4.17 TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		✓		
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✓		

This section is based on the *Cultural Resources Assessment for the 2300 Redondo Avenue Project* (Cultural Assessment) prepared by Cogstone (dated September 2017); refer to Appendix B, *Cultural Assessment*.

As of July 1, 2015, California Assembly Bill 52 (AB 52) was enacted and expanded CEQA by establishing a formal consultation process for California tribes within the CEQA process. The bill specifies that any project may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to "begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project." Section 21074 of AB 52 also defines a new category of resources under CEQA called "tribal cultural resources." Tribal cultural resources are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is either listed on or eligible for the California Register of Historical Resources or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource.

In compliance with AB 52, the City of Long Beach distributed letters to numerous Native American tribes notifying each tribe of the opportunity to consult with the City regarding the proposed project. The tribes were identified based on a list provided by the Native American Heritage Commission (NAHC), or were tribes that had previously requested to be notified of future projects proposed by the City. These letters were distributed on July 27, 2017. The only tribe to respond to the City's solicitation for consultation was the Gabrielino Band of Mission Indians – Kizh Nation. The tribe requested that a Native American monitor be present during ground-disturbing activities required for construction of the project.

On February 19, 2016, the California Natural Resources Agency proposed to adopt and amend regulations as part of AB 52 implementing Title 14, Division 6, Chapter 3 of the California Code of Regulations, CEQA Guidelines, to include consideration of impacts to tribal cultural resources pursuant to Government Code Section 11346.6. On September

27, 2016, the California Office of Administrative Law approved the amendments to Appendix G of the CEQA Guidelines, and these amendments are addressed within this environmental document.

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

Less Than Significant Impact With Mitigation Incorporated. Refer to Response 4.5(a). Based on the Cultural Assessment, there are no resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k) that would be affected by the project.

The existing USPS facility is not associated with significant events, important persons, or distinctive characteristics of a type, period, or method of construction; representing the work of an important creative individual; or does not possess high artistic values. As such, demolition of the USPS facility would not result in a significant impact to a historic resource. However, as part of the Cultural Assessment, three local historical societies (Long Beach Historical Society, Long Beach Heritage, and Signal Hill Historical Society) were contacted requesting information regarding the historical context of the USPS facility. One response letter was received from Long Beach Heritage organization on August 21, 2017. The letter noted that a dedication plaque is located on the USPS facility and requested that the plaque be saved and donated to the Long Beach Historical Society (Mitigation Measure CUL-1). Thus, with implementation of Mitigation Measure CUL-1, potential impacts regarding a historical resource would be reduced to a less than significant level.

Mitigation Measures: Refer to Mitigation Measure CUL-1.

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant Impact With Mitigation Incorporated. As noted above, the City of Long Beach solicited consultation with potentially affected Native American tribes (as applicable) regarding the proposed project in accordance with AB 52. The only tribe to respond to the City's solicitation for consultation was the Gabrielino Band of Mission Indians – Kizh Nation. The tribe requested that a Native American monitor be present during ground-disturbing activities required for construction of the project.

Based on the Cultural Assessment, the potential for discovery of archaeological resources (including tribal cultural resources) is considered low, due to the amount of previous disturbance that has occurred on the project site. Although the likelihood of any project impacts in this regard is considered remote, Mitigation Measures TCR-1 and TCR-2 have been incorporated as a result of the AB 52 consultation conducted for the proposed project. With implementation of this mitigation measure, impacts would be less than significant.

Mitigation Measures:

TCR-1 Prior to the issuance of any Grading Permit for the project, the City of Long Beach Development Services Department shall ensure that the construction contractor provide access for Native American monitoring during ground-disturbing activities. This provision shall be included on project plans and specifications. The site shall be made accessible to any Native American tribe requesting to be present, provided

adequate notice is given to the construction contractor and that a construction safety hazard does not occur. The monitor(s) shall be approved by a local tribal representative and shall be present on-site during the construction phases that involve any ground disturbing activities. The monitor(s) shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the monitor(s) shall be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in the California Environmental Quality Act (CEQA), California Public Resources Code Division 13, Section 21083.2 (a) through (k). Neither the City of Long Beach, project applicant, or construction contractor shall be financially obligated for any monitoring activities. If evidence of any tribal cultural resources is found during ground-disturbing activities, the monitor(s) shall have the capacity to halt construction in the immediate vicinity of the find, in order to recover and/or determine the appropriate plan of recovery for the resource. The recovery process shall not unreasonably delay the construction process. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources.

TCR-2 All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and Native American monitor. If the resources are Native American in origin, the tribe shall coordinate with the landowner regarding treatment and curation of these resources. The treatment plan established for the resources shall be in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) shall be the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis.

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4.18 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✓	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			✓	

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The State Water Resource Control Board (SWRCB) works in coordination with the RWQCBs to preserve, protect, enhance, and restore water quality. The City is within the jurisdiction of the Los Angeles RWQCB. The Los Angeles County Sanitation District (LACSD) oversees treatment facilities that serve the City. The LACSD constructs, operates, and maintains facilities to collect, treat, recycle, and dispose of sewage and industrial wastes. Sewer services for the project site are provided by Long Beach Water Department (LBWD). The LBWD operates and maintains nearly 765 miles of sanitary sewer lines, delivering over 40 million gallons per day to Los Angeles County Sanitation Districts (LACSD) facilities located on the north and south sides of the City.[1] From these facilities, treated sewage is used in one of three ways: 1) is used to irrigate parks, golf courses, cemeteries, and athletic fields, 2) is used to recharge the City's groundwater basin, or 3) it will be pumped into the Pacific Ocean.[2]

Currently, a majority of the City's wastewater is delivered to the Joint Water Pollution Control Plant (JWPCP) of the LACSD. The remaining portion of the City's wastewater is delivered to the Long Beach Water Reclamation Plant of the LACSD. JWPCP is located approximately 7.6 miles west of the project site at 24501 South Figueroa Street in the City of Carson. The plant occupies approximately 420 acres to the east of the Harbor (I-110) Freeway.[3] The JWPCP is the largest of the LACSDs' wastewater treatment plants. It provides both primary and secondary treatment for 260 million gallons of wastewater per day (mgd).[4] The plant serves a population of approximately 3.5 million people,

[1] Long Beach Water Department, *Sewage Treatment*, http://www.lbwater.org/sewage-treatment, accessed April 26, 2017.
[2] Ibid.
[3] Joint Water Pollution Control Plant website, http://www.lacsd.org/wastewater/wwfacilities/jwpcp/, accessed April 26, 2017.
[4] Joint Water Pollution Control Plant website, http://www.lacsd.org/wastewater/wwfacilities/jwpcp/, accessed April 26, 2017.

including most of the 460,000 residents of the City.[5] At JWPCP, the treated wastewater is disinfected with sodium hypochlorite (chlorine) and sent to the Pacific Ocean through networks of outfalls that extend 1.5 miles off the Palos Verdes Peninsula to a depth of 200 feet.[6] The Long Beach Water Reclamation Plant is located at 7400 East Willow Street in the City of Long Beach, approximately 3.5 miles east of the project site. The plant occupies 17 acres west of the San Gabriel River (I-605) Freeway.[7] The plant provides primary, secondary, and tertiary treatment for 25 million gallons of wastewater per day.[8] The plant serves a population of approximately 250,000 people, including a portion of the 460,000 residents of the City.[9]

The project site is currently developed with a 337,409 square-foot USPS facility. Implementation of the proposed project would involve demolition of the existing USPS facility and construction of 427,565 square feet of manufacturing/light industrial uses. The proposed light industrial/manufacturing facility would be approximately 90,156 square feet larger than the existing USPS facility. Although the proposed project may result in a slightly increased demand for wastewater treatment and disposal, the project would be subject to standard connection fees collected by LADSC for all new development projects within its service area. These connection fees ensure that sufficient capacity is available and that the wastewater treatment requirements of the Los Angeles RWQCB are met. As such, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. The LBWD maintains and operates its own municipal water system, and would continue to provide water service to the project site. Impacts regarding wastewater treatment facilities are described in Response 4.17(a), above. The existing USPS facility at the project site currently receives water service from LBWD and wastewater services from LACSD for ongoing operations, and existing water infrastructure would be available to serve the proposed project. As such, it is not anticipated that any new water or wastewater facilities would be required to serve the project, that which would result in a significant environmental effect.

Mitigation Measures: No mitigation is required.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. The existing USPS facility is currently regulated under the NPDES Storm Water Permit issued by the Los Angeles RWQCB for Long Beach. The project site is currently paved with limited ornamental landscaping located along the site boundary and the eastern side of the mail processing facility. Similarly, the proposed project would be paved with ornamental landscaping located along the site boundary, around each of the three light industrial/manufacturing buildings, and within on-site parking areas. Drainage conditions under the proposed project would remain similar to existing conditions, as would the amount of impervious surfaces. Aside from minor ancillary connections to existing City storm drain facilities, no other drainage facilities would need to be constructed. As such, a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

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5 Ibid.
6 Ibid.
7 Los Angeles County Sanitation District, *Long Beach Water Reclamation Plant*, http://www.lacsd.org/wastewater/wwfacilities/joint_outfall_system_wrp/long_beach.asp, accessed April 26, 2017.
8 Ibid.
9 Ibid.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. Long Beach receives its potable (drinking) water supply from two main sources, groundwater and imported water. Approximately 60 percent of the City's water supply is produced from groundwater wells located within the City.[10] The remainder of the City's potable water supply is treated surface water purchased from the Metropolitan Water District of Southern California (MWD). This water originates from two sources: the Colorado River, via the 242-mile Colorado River Aqueduct and Northern California's Bay-Delta region, via the 441-mile California Aqueduct.[11] Long Beach satisfies non-potable water demand through reclaimed water supplies. Reclaimed water originates from the Long Beach Water Reclamation Plant. The water produced at the Long Beach Water Reclamation Plant comes from sewage water that is treated to a quality standard that is suitable for irrigating parks, golf courses, and other outdoor landscapes.

According to the City's 2010 Urban Water Management Plan (UWMP), the City's projected water demand is 67,620 acre-feet per year (AFY) consisting of 24,520 AFY from MWD wholesale purchases, 33,000 AFY from groundwater, and 10,100 AFY from recycled water.[12] The UWMP projects that water demand in 2035 would increase to 70,929 AFY. The UWMP includes an analysis of water supply reliability projected through 2035. Based on the analysis, the City would be capable of providing adequate water supply to its service area under a normal supply and demand scenario, single dry-year supply and demand scenario, and multiple dry-year supply and demand scenario through 2035. Furthermore, the MWD 2010 UWMP states that the MWD "has supply capabilities that would be sufficient to meet expected demands from 2015 through 2035 under the sing dry-year and multiple dry-year conditions."[13] Thus, the City and MWD UWMPs account for increased demand as growth within the City occurs.

Although the project may result in an increase in water demand due an increase in development intensity on-site, the City and MWD UWMPs demonstrate that adequate supply is available to serve the City through the long-range year of 2035. The UWMP projections are based upon growth and buildout as provided within the City's General Plan, and the proposed project is consistent with the site's land use designation of LUD 7; Mixed Uses. As such, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. Refer to Response 4.18(a), above.

Mitigation Measures: No mitigation is required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Implementation of the proposed project would result in demolition of the existing USPS facility and construction of a light industrial/manufacturing facility. The primary disposal facility for the proposed project is anticipated to be the EDCO Recycling and Transfer Station, located at 2755 California Avenue, Signal Hill, approximately 1.75 miles northwest of the project site. This facility is a 3.8-acre large volume transfer station and accepts mixed asphalt shingles, construction and demolition waste, food wastes, green materials, and industrial, inert,

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10 Long Beach Water Department, *Sources of Water*, http://www.lbwater.org/sources-water, accessed May 2, 2017.
11 Ibid.
12 Long Beach Water Department. *2010 Urban Water Management Plan*. September 2011.
13 Metropolitan Water District of Southern California. *Regional Urban Water Management Plant*. November 2010.

metals, metals, mixed municipal, and wood waste.[14] Once the waste has been processed at EDCO Recycling and Transfer Station, waste would be transferred to a nearby landfill for disposal. The nearest landfill to the project site that would handle solid waste and recycling for the project is Savage Canyon Landfill located at 13919 Penn Street in the City of Whittier, approximately 14 miles to the northeast of the project site. The Savage Canyon Landfill has a daily permitted capacity of 3,350 tons per day and a maximum permitted capacity of 19,337,450 cubic yards (with a remaining capacity of 9,510,833 cubic yards).

Demolition and construction activities associated with the proposed development would generate construction debris (soil, asphalt, demolished materials, etc.). However, the generation of these materials would be short-term in nature and would not have the capability to substantially affect the capacity of regional landfills. Based on solid waste generation rates provided by CalRecycle for similar types of uses (light industrial/manufacturing), the project would generate an estimated 3 tons per day of solid waste.[15] Based on the disposal capacity of landfills serving the project site, this would be an incremental increase in total disposal that would not affect the availability of solid waste disposal capacity (i.e., 0.08 percent of Savage Canyon Landfill's daily permitted capacity). Therefore, impacts related to solid waste would be less than significant.

Mitigation Measures: No mitigation is required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. The County of Los Angeles prepares and administers solid waste management plans to project the capacity of the County's landfills and other facilities to accommodate future solid waste demand generated by future development. Local jurisdictions, including the City of Long Beach, are required to assess the effect of new development on the County's facilities and develop and implement programs to reduce the amount of solid waste generated within their boundaries that requires disposal at such facilities.

The City is required to comply with Assembly Bill 939 (AB 939) which recognizes that an integrated approach to waste management is effective in extending the life of existing landfills and preventing the need to devote additional valuable land resources to trash disposal. The City is required to comply with AB 939 provisions and any related legislation that may be enacted. The City participates in a variety of efforts to meet the AB 939 source reduction, recycling, and composting requirements. Nation's Best Environmental Services Bureau (Bureau) for Long Beach is provided through the City's Public Works Department. The Bureau provides several websites and a monthly e-newsletter called *LB EcoGuide* to inform and educate the local community of recycling, refuse collection, and hazardous waste requirements and events, as well as street sweeping and parking enforcement and donation opportunities. The project would comply with adopted programs and federal, State, and local regulations pertaining to solid waste, including the *LBMC* Chapter 50, *Solid Waste Management*, and Chapter 53, *Construction and Demolition Materials Management*. With compliance with the *LBMC*, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

[14] CalRecycle, Facility/Site Summary Details: EDCO Recycling and Transfer (19-AA-1112), http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-1112/Detail/, accessed May 2, 2017.

[15] CalRecycle, *Estimated Solid Waste Generation Rates*, https://www2.calrecycle.ca.gov/WasteCharacterization/ General/Rates, accessed May 3, 2017.

4.19 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		✓		
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		✓		

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact With Mitigation Incorporated. As shown within Section 4.4, *Biological Resources*, construction of the light industrial/manufacturing facility would occur within an urbanized and fully developed area. The project site has been previously graded and developed with a USPS facility. The project would not result in direct impacts to any sensitive species or wildlife habitat and impacts to sensitive biological resources would be less than significant. Since the proposed project may result in the removal of on-site ornamental vegetation and trees within City right-of-way along Redondo Avenue and the project site, the proposed project could result in potential impacts to nesting birds protected by the Migratory Bird Treaty Act (MBTA). Mitigation Measure BIO-1 has been included in order to minimize potential impacts to nesting birds in the event any mature trees are affected during the avian nesting season.

In addition, as described within Section 4.5, *Cultural Resources*, the project site has been completely disturbed by development and have been subject to ground disturbance in the past. As such, any historical, archaeological, and paleontological resources which may have existed in the project area have likely been disturbed. However, Mitigation Measures CUL-1 and CUL-2 would be required in the event unexpected resources are uncovered during the grading and excavation process. With implementation of recommended mitigation, the project is not anticipated to eliminate important examples of the major periods of California history or prehistory. Thus, impacts in this regard would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant Impact With Mitigation Incorporated. The proposed project would include demolition of the existing USPS facility and construction of a light industrial/manufacturing facility. The project would not result in substantial population growth within the area, either directly or indirectly. Although the project may incrementally affect other resources that were determined to be less than significant, the project's contribution to these effects is not considered "cumulatively considerable," in consideration of the relatively nominal impacts of the project and mitigation measures provided. Implementation of mitigation measures at the project-level would reduce the potential for the incremental effects of the proposed project to be considerable when viewed in connection with the effects of past projects, current projects, or probable future projects.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact With Mitigation Incorporated. Previous sections of this Initial Study reviewed the proposed project's potential impacts related to aesthetics, air quality, geology and soils, greenhouse gases, hydrology/water quality, noise, hazards and hazardous materials, traffic, and other issues. As concluded in these previous discussions, the proposed project would result in less than significant environmental impacts with implementation of the recommended mitigation measures. Therefore, the proposed project would not result in environmental impacts that would cause substantial adverse effects on human beings.

4.20 REFERENCES

The following references were utilized during preparation of this Initial Study. These documents are available for review at the City of Long Beach Development Services Department, located at 333 West Ocean Boulevard, 3rd Floor, Long Beach, California 90802.

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2. Cal Fire, *Very High Fire Hazard Severity Zones in LRA*, http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones, dated September 2011, accessed on May 3, 2017.

3. California Department of Conservation, *Farmland Mapping and Monitoring Program, California Important Farmland Finder*, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx, accessed on April 28, 2017.

4. California Department of Fish and Wildlife, *California Regional Conservation Plans*, August 2015.

5. California Department of Transportation, *California Scenic Highway Mapping System*, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed May 1, 2017.

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7. California Environmental Quality Act, 1970, as amended, *Public Resources Code Sections 21000-21178*.

8. California Geological Survey, *Tsunami Inundation Map for Emergency Planning*, Long Beach Quadrangle, Scale 1:24,000, March 1, 2009.

9. CalRecycle, Estimated Solid Waste Generation Rates, https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates, accessed May 3, 2017.

10. CalRecycle, Facility/Site Summary Details: EDCO Recycling and Transfer (19-AA-1112), http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-1112/Detail/, accessed May 2, 2017.

11. City of Long Beach, *City of Long Beach General Plan*, Last updated October 2013.

12. City of Long Beach, *City of Long Beach Municipal Code*, Codified through Ordinance No. ORD-17-001, Enacted February 14, 2017, Supplement No. 16.

13. City of Long Beach, *City of Long Beach Municipal Code*, Chapter 21.33, *Industrial Districts*.

14. City of Long Beach, *City of Long Beach Municipal Code*, Section 8.80.160 and Section 8.80.170, 1977.

15. City of Long Beach, Department of Health and Human Services, Bureau of Environmental Health, *No Further Action Letter for 2300 Redondo Avenue, Long Beach, California 90815*, dated February 24, 2017.

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17. City of Long Beach, Parks, Recreation and Marine website, http://www.longbeach.gov/park/, accessed April 24, 2017.

18. City of Long Beach, *Police Reporting Districts with Divisions & Beats*, http://www.longbeach.gov/ti/media-library/ documents/gis/map-catalog/police-reporting-districts-map-large-(36-x-36)/, accessed April 24, 2017.

19. City of Long Beach Unified School District, *About – Long Beach Unified School District*, http://www.lbusd.k12.ca.us/ District/, accessed April 24, 2017.

20. City of Signal Hill, *City of Signal Hill General Plan Circulation Element*, updated December 2009.

21. City of Long Beach, *Sustainable City Action Plan,* February 2010.

22. Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report*, August 2000.

23. Federal Emergency Management Agency, Flood Insurance Rate Map #06037C1970F, Panel 1970 of 2350, revised September 26, 2008.

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25. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006, http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_ Manual.pdf.

26. First American Real Estate Solutions, *RealQuest Property Data*, accessed on April 18, 2017.

27. Google Earth Maps, http://maps.google.com, accessed May 2017.

28. Governor's Office of Planning and Research, *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, 2008.

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31. Hazard Management Consulting, *Results of a Subsurface Investigation*, dated February 9, 2017.

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33. Long Beach Water Department, *Sewage Treatment*, http://www.lbwater.org/sewage-treatment, accessed April 26, 2017.

34. Long Beach Water Department, *Sources of Water*, http://www.lbwater.org/sources-water, accessed May 2, 2017.

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5.0 INVENTORY OF MITIGATION MEASURES

AESTHETICS

AES-1 Construction equipment staging areas shall be located, to the greatest extent feasible, away from nearby existing sensitive viewers (e.g., resident, pedestrians/bicyclists, and motorists), and shall utilize appropriate screening (i.e., temporary fencing with opaque material) to shield public views of construction equipment and material. Prior to issuance of a grading permit, the City of Long Beach City Engineer shall verify that staging locations are identified on final grading/development plans and that appropriate perimeter screening is included as a construction specification.

AES-2 The project applicant shall ensure that any exterior lighting does not spill over onto any adjacent properties. Prior to issuance of any building permit, the project applicant shall prepare and submit an Outdoor Lighting Plan to the City of Long Beach Development Services Department, for review and approval, that includes a footcandle map illustrating the amount of light from the proposed project at adjacent light sensitive receptors. All exterior light fixtures shall be shielded or directed away from adjoining uses. The plan shall demonstrate consistency with *Long Beach Business Center PD-7* lighting standards.

AIR QUALITY

AQ-1 Prior to ground disturbance associated with the project, the City of Long Beach shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered every three hours during daily construction activities when dust is observed migrating from the project site to prevent excessive amounts of dust;
- Apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas to reduce the need for watering after dust is observed to be migrating from the site. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;
- Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;
- All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
- Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
- Track-out devices such as gravel bed track-out aprons (3 inches deep, 25 feet long, 12 feet wide per lane and edged by rock berm or row of stakes) shall be installed to reduce mud/dirt trackout from unpaved truck exit routes. Alternatively, a wheel washer shall be used at truck exit routes;
- On-site vehicle speed shall be limited to 15 miles per hour;

- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site; and

- Trucks associated with soil-hauling activities shall avoid residential streets and utilize City-designated truck routes to the extent feasible.

AQ-2 Prior to the issuance of a Certificate of Occupancy, the project applicant shall provide a plan to the City of Long Beach City Engineer illustrating a program for compliance with the following measures:

- During project operations, the project applicant shall limit the number of diesel-fueled trucks accessing the project site to a maximum of 290 trucks per day if the truck fleet is wholly or partially older than the United States Environmental Protection Agency (U.S. EPA)/California Air Resources Board (CARB) truck engine standards for the 2010 model year. Alternatively, the project applicant shall ensure that all diesel-fueled trucks accessing the project site meet the U.S. EPA/CARB truck engine standards for the 2010 model year or better. This requirement shall be documented within project plans and specifications and verified by the City of Long Beach prior to Site Plan Review.

- Prohibit all vehicles from idling in excess of five minutes, both on- and off-site. Additionally, signs shall be posted informing truck drivers about the CARB diesel idling regulations and the health effects of diesel particulate matter.

- Post signs on the interior and exterior of the project site near the gates, requiring the following:

  - Truck drivers shall turn off engines when not in use;
  - Trucks shall not idle for more than five minutes; and
  - Telephone numbers of the California Air Resources Board to report violations.

AQ-3 During project operations, the project applicant shall ensure on-site off-road equipment (e.g., forklifts, yard trucks/hostlers, etc.) are electrically powered. This requirement shall be documented within project plans and specifications and verified by the City of Long Beach prior to Site Plan Review.

BIOLOGICAL RESOURCES

BIO-1 If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from February 1 - August 31), a pre-construction clearance survey for nesting birds shall be conducted within 3 days prior to any ground disturbing activities.

The biologist conducting the clearance survey shall document the negative results if no active bird nests are observed on the project site during the clearance survey with a brief letter report indicating that no impacts to active bird nests would occur before construction can proceed. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Results of the pre-construction survey and any subsequent monitoring shall be provided to the California Department of Fish and Wildlife (CDFW) and other appropriate agency.

CULTURAL RESOURCES

CUL-1 Prior to initiation of any building demolition activities on the project site, the construction contractor shall ensure that the existing dedication plaque currently located on the United States Postal Service (USPS) facility be removed and donated to the Long Beach Historical Society for curation. This requirement shall be denoted within project plans and specifications, and subject to verification by the City of Long Beach City Engineer.

CUL-2 If evidence of subsurface cultural resources is found during excavation and other ground-breaking activities, all work within 50 feet of the discovery shall cease and the construction contractor shall contact the City of Long Beach Development Services Department. With direction from the Development Services Department, an archaeologist certified by the County of Los Angeles shall be retained to evaluate the discovery prior to resuming grading in the immediate vicinity of the find. If warranted, the archaeologist shall develop a plan of mitigation which may include, but shall not be limited, to, salvage excavation, laboratory analysis and processing, research, curation of the find in a local museum or repository, and preparation of a report summarizing the find.

CUL-3 If evidence of subsurface paleontological resources is found during excavation and other ground-breaking activities, all work within 50 feet of the discovery shall cease and the construction contractor shall contact the City of Long Beach Development Services Department. With direction from the Development Services Department, a paleontologist certified by the County of Los Angeles shall evaluate the find. If warranted, the paleontologist shall prepare and complete a standard Paleontological Resources Mitigation Program for the salvage and curation of identified resources.

GEOLOGY AND SOILS

GEO-1 Prior to the initiation of construction, the project applicant shall prepare a site-specific geotechnical/soils report which addresses structural and geotechnical conditions at the project site that shall be subject to review and approval by the City of Long Beach City Engineer. The geotechnical report shall address soil stability, including liquefaction, and shall address potential impacts during earthquakes. Additionally, the City of Long Beach City Engineer shall ensure that all improvements conform to existing building requirements of the California Building Code (CBC) in order to minimize the potential for damage and major injury during a seismic event. The geotechnical/soils report shall include specific design measures, which are based on the determination of Site Classification and Seismic Design Categories, specific to the project site. Moreover, design and construction of the proposed project shall comply with existing City standards, including Chapter 18.68 (Earthquake Hazard Regulations) of Title 18 (Buildings and Construction), of the Long Beach Municipal Code (*LBMC*).

HAZARDS AND HAZARDOUS MATERIALS

HAZ-1 Prior to demolition activities, the construction contractor shall retain a licensed abatement contractor registered in the State of California and certified in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1403, to perform asbestos-related activities. The abatement of asbestos shall be completed by the project applicant, as overseen by the licensed abatement contractor, prior to any activities that would disturb ACMs, including existing flooring materials identified in the *Asbestos Survey Report and Inspection for Pre-Demolition Hazardous Materials*, dated January 4, 2017. If additional materials are discovered during demolition of the building(s) and laboratory analysis of samples of those materials was not performed, samples shall be collected and analyzed prior to removal or disturbance of the materials. Applicable laws and regulations shall be followed, including those provisions requiring notification, of contractors who may contact the asbestos-containing materials, of the

location of these materials. Contractors performing asbestos abatement activities shall provide evidence of abatement activities to the City of Long Beach City Engineer.

HAZ-2 Prior to demolition activities, older florescent light fixture ballasts that are not labeled as "no PCBs" shall be removed by a licensed contractor with proper certifications and training for handling hazardous wastes. Contractors performing removal activities shall provide evidence of removal to the City of Long Beach City Engineer.

HAZ-3 A qualified Lead Specialist shall be retained by the construction contractor for activities involving demolition and disposal of on-site bumper posts, curbs, and corner guards. Proper abatement shall be conducted per the instruction of the Lead Specialist prior to any disturbance of these materials. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring, and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the City of Long Beach City Engineer.

HAZ-4 Prior to issuance of a Certificate of Occupancy, the project applicant shall submit documentation as proof, to the City of Long Beach City Engineer, that the relocation of any monitoring wells have been conducted in compliance with the City of Long Beach, Department of Environmental Health standards and regulations.

HAZ-5 The construction contractor shall verify that all exported soils are not contaminated with hazardous materials above regulatory thresholds in consultation with a Phase II/Site Characterization Specialist. If export soils are determined to be contaminated above regulatory thresholds, the Phase II/Site Characterization Specialist shall recommend proper handling, use, and/or disposal of these soils.

HAZ-6 At least three business days prior to any lane closure, the construction contractor shall notify the Long Beach Fire Department (LBFD) and Long Beach Police Department (LBPD), along with the City of Long Beach City Engineer, of construction activities that would impede movement (such as lane closures) along Redondo Avenue and Burnett Street, in order to ensure uninterrupted emergency access and maintenance of evacuation routes.

NOISE

NOI-1 Prior to Grading Permit issuance, the project applicant shall demonstrate, to the satisfaction of the City of Long Beach City Engineer that the project complies with the following:

- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.

- Property owners and occupants located within 100 feet of the project boundary shall be sent a notice, at least 15 days prior to commencement of construction of each phase, regarding the construction schedule of the proposed project. A sign, legible at a distance of 50 feet shall also be posted at the project construction site. All notices and signs shall be reviewed and approved by the Development Services Department, prior to mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and a telephone number where residents can inquire about the construction process and register complaints.

- Prior to issuance of any Grading or Building Permit, the Contractor shall provide evidence that a construction staff member will be designated as a Noise Disturbance Coordinator and will be present on-site during construction activities. The Noise Disturbance Coordinator shall be

responsible for responding to any local complaints about construction noise. When a complaint is received, the Noise Disturbance Coordinator shall notify the City within 24-hours of the complaint and determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the Public Works Department. All notices that are sent to residential units immediately surrounding the construction site and all signs posted at the construction site shall include the contact name and the telephone number for the Noise Disturbance Coordinator.

- Prior to issuance of any Grading or Building Permit, the project applicant shall demonstrate to the satisfaction of the City Engineer that construction noise reduction methods shall be used where feasible. These reduction methods include shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and electric air compressors and similar power tools.

- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

TRANSPORTATION/TRAFFIC

TR-1 Prior to issuance of a Certificate of Occupancy, the signal timing at the Redondo Avenue/Willow Street intersection shall be modified to accommodate the traffic expected at this location. A signal timing study shall be prepared to confirm the optimal cycle length. The requirement for modification of signal timing and the associated signal timing study shall be denoted on project plans and specifications, subject to verification by the City of Long Beach City Engineer.

TR-2 Prior to issuance of a Certificate of Occupancy, a two-phase traffic signal at the Redondo Avenue/Industry Drive intersection shall be installed. The existing two-way left-turn lane in the southbound direction shall be converted into a left-turn lane. A signal timing study shall be prepared prior to the installation of the signal. The requirement for signal installation and the associated signal timing study shall be denoted on project plans and specifications, subject to verification by the City of Long Beach City Engineer.

TR-3 Prior to issuance of a Certificate of Occupancy, the signal timing at the Lakewood Boulevard/Willow Street intersection shall be modified to accommodate the traffic expected at this location. A signal timing study shall be prepared to confirm the optimal cycle length. The requirement for modification of signal timing and the associated signal timing study shall be denoted on project plans and specifications, subject to verification by the City of Long Beach City Engineer.

TR-4 Prior to the initiation of construction, the City of Long Beach City Engineer shall ensure that a Traffic Management Plan (TMP) has been prepared for the proposed project. The TMP shall include measures to minimize potential safety impacts during the short-term construction process, when partial lane closures may be required. It shall include measures such as construction signage, pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use. The TMP shall be incorporated into project specifications for verification prior to final plan approval.

TRIBAL CULTURAL RESOURCES

TCR-1 Prior to the issuance of any Grading Permit for the project, the City of Long Beach Development Services Department shall ensure that the construction contractor provide access for Native American monitoring during ground-disturbing activities. This provision shall be included on project plans and specifications.

The site shall be made accessible to any Native American tribe requesting to be present, provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur. The monitor(s) shall be approved by a local tribal representative and shall be present on-site during the construction phases that involve any ground disturbing activities. The monitor(s) shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the monitor(s) shall be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in the California Environmental Quality Act (CEQA), California Public Resources Code Division 13, Section 21083.2 (a) through (k). Neither the City of Long Beach, project applicant, or construction contractor shall be financially obligated for any monitoring activities. If evidence of any tribal cultural resources is found during ground-disturbing activities, the monitor(s) shall have the capacity to halt construction in the immediate vicinity of the find, in order to recover and/or determine the appropriate plan of recovery for the resource. The recovery process shall not unreasonably delay the construction process. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources.

TCR-2 All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and Native American monitor. If the resources are Native American in origin, the tribe shall coordinate with the landowner regarding treatment and curation of these resources. The treatment plan established for the resources shall be in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) shall be the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis.