ORANGE FIRE STATION NO. 1 & HEADQUARTERS PROJECT
ORANGE, CA

MITIGATED NEGATIVE DECLARATION NO. 1862-18

Lead Agency:
City of Orange
Community Development Department • Planning Division
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Date:
June 2020

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MITIGATED NEGATIVE DECLARATION NO. 1862-18

Project Title:
Orange Fire Station No. 1 and Headquarters Project

Reference Application Numbers:
MND No. ENV 1862-18
Zone Change No. 1301-20
Tentative Parcel Map No. 0016-20

Lead Agency:
City of Orange
300 E. Chapman Avenue
Orange, CA 92866

Contact Person and Telephone No.:
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Contact Person and Telephone No.:
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949.533.2049

Project Location:
The main Project site is located at 105 S. Water Street at the intersection of Chapman Avenue and Water Street. The associated parking lot is sited diagonally across the southwestern corner of the Project site, across Water Street (parking site).

Existing General Plan Designation:
Public Facilities and Institutions (PFI)

Existing Zoning Classification:
Office Professional (O-P) and Single Family Residential (R-1-6)

INTRODUCTION

The City of Orange's current Fire Headquarters, located at 176 S. Grand Street Orange, CA 92866, serves as both Fire Headquarters and Fire Station No. 1, and provides service to the southern portion of the City bounded by Struck Avenue on the north, southerly City limits on the south, Batavia Avenue on the west and State Route 55 Freeway on the east. This Fire Headquarters and Fire Station No. 1 building was originally constructed in 1969, and over the years the fire department's staff has outgrown the current Fire Headquarters.

The City of Orange is proposing a new Fire Station No. 1, Fire Headquarters, and associated parking lot to replace the current aging and undersized station (Proposed Project). The Proposed Project site is comprised of both the main Project site housing the new fire station and headquarters, as well as the site of the proposed parking lot across Water Street. The new building for the Fire Station No. 1 and Headquarters will be sited on a City-owned lot at 105 S. Water Street (main Project site), which is located approximately 0.6 mile east from its existing location. The new building would be larger than the current facility including larger facilities for the Fire Station No. 1 operations, as well as larger administration and training areas for the Fire Headquarters. The associated parking lot is sited diagonally across the southwestern corner of the Project site, across Water Street (parking site).

The City has prepared this Initial Study/Mitigaiton Negative Declaration (IS/MND) to address and disclose the potential environemntal effects of project implementation in compliance with the California Environmental Quality Act of 1970 (CEQA) and the Guidelines for the

Implementation of the California Environmental Quality Act (CEQA Guidelines), Section 15000 et seq.

Consistent with CEQA Guidelines Section 15071, this IS/MND includes a description of the Project, an evaluation of the potential environmental impacts, and findings from the environmental review. This IS/MND evaluates the potential environmental impacts that may result from implemenation of the Proposed Project. The City is the Lead Agency under CEQA, and its City Council is responsible for the adoption of the environmental analysis and approval of the Project.

EXISTING SETTING

Project Site

The Project site is comprised of two areas, the Fire Station No. 1 and Headquarters site, and the Water Street-separated parking lot area, as follows:

Fire Station No. 1 Headquarters

The site of the new Orange Fire Station No. 1 and Headquarters (or main Project site), approximately 1.52 acres in area, is located on 105 S. Water Street, approximately 417 feet east of the boundary of the Old Towne Orange Historic District (see Figure 1 and Figure 2). The site of the parking lot (parking site) for the Fire Department is located diagonally across the southwest corner of the site, across Water Street. The main Project site is bordered by East Chapman Avenue on the north, South Jameson Street on the east, the City of Orange Department of Water on the south and South Water Street on the west. Chapman Avenue, lined by historic buildings, is considered the gateway to the Old Towne Historic District and leads to the Plaza. Currently, the main Project site is unpaved, graded with little to no vegetation, and is vacant except for an existing storage building onsite. There are multiple parcels that occur on the site and a Tenative Parcel Map is proposed to merge all the parcels into a single parcel. The General Plan Land Use Element designation for this site is Public Facilities and Institutions (PFI). The Project site is zoned as Office Professional (O-P) and Single Family Residential (R-1-6). The Project proposes a zone change of the site to Public Institution (P-I) to better reflect the existing nature of the land uses in the neighborhood and to ensure that the Proposed Project is consistent with the General Plan. Surrounding land uses and zoning of nearby properties are as follows:

- North: The northern vicinity to the main Project site has a General Plan land use designation of Neighborhood Office Professional (NOP) (Maximum FAR 0.5) and is zoned Office Professional (O-P). The existing uses are one to two-story office buildings, including therapy centers, escrow service offices, pharmacies and assisted living facilities.
- South: The southern vicinity to the main Project site has General Plan land use designations of Public Facilities and Institutions (PFI) (Maximum FAR 0.5 and 2.0 respectively) and Low Medium Residential (LMDR) (6-15 DU/AC). The area is zoned Public Institution (P-I) and Single Family Residential (R-1-6). The existing uses include one-story single-family residential buildings, parking lots and the City of Orange Water Division.
- East: The eastern vicinity to the main Project site has General Plan land use designations of Neighborhood Office Professional (NOP) (Maximum FAR 0.5) and Low Density Residential (LDR) (2-6 DU/AC). The area is zoned Office Professional (O-P) and Single

Family Residential (R-1-6). The existing uses are one-story single-family residential buildings.

- West: The western vicinity to the main Project site has General Plan land use designations of Neighborhood Office Professional (NOP) (Maximum FAR 0.5) and Low Density Residential (LDR) (2-6 DU/AC). The area is zoned Office Professional (O-P). The existing ground uses are two-story office buildings including dental clinics.

Parking Lot

The site of the parking lot for the Fire Department is approximately 1.23 acres in area, located diagonally across the southwest corner of the site, across Water Street, and will include a reorganization of the existing parking lot, along with the addition of landscaped features and security gates. Currently, the parking site is a combination of asphalt paving and compacted gravel, fenced, with a few small trees and shrubs on site. The site of the proposed parking lot has a Low Density Residential (LDR) (2-6 DU/AC) General Plan land use designation and is zoned Single Family Residential (R-1-6). Surrounding land uses and zoning categories are as follows:

- North: The Northern vicinity to the parking site has a General Plan land use designation of Neighborhood Office Professional (NOP) (Maximum FAR 0.5) and is zoned Office Professional (O-P). The existing uses are a two-story office building, housing dental offices.
- South: The southern vicinity to the parking site has General Plan land use designations of Low Medium Residential (LMDR) (6-15 DU/AC). The area is zoned Residential Duplex Single-story overlay (R-2-6 A), Multiple Family Residential (R-3). The existing ground uses are one-story single-family residential buildings.
- East: The eastern vicinity to the parking site has General Plan land use designations of Public Facilities and Institutions (PFI) (Maximum FAR 0.5 and 2.0 respectively). The area is zoned Public Institution (P-I). The existing ground use is the City of Orange Water Division.
- West: The western vicinity to the parking site has General Plan land use designations of Low Density Residential (LDR) (2-6 DU/AC). The area is zoned Single Family Residential (R-1-6). The existing ground uses are one-story single-family residences and parking lots.

PROJECT DESCRIPTION

Background:

The Orange City Fire Department was established on December 14, 1905, at a meeting of the City's Fire and Water Committee to organize a volunteer fire department. At the present day, the Fire Department houses eight fire stations, two Battalion Chief vehicles, seven front line fire engines (also called "pumpers"), one front line fire truck (also called a "ladder truck"), one front line quintuple combination pumper (also referred to as a "quint"), one front line Urban Search and Rescue truck, four front line rescue ambulances, two front line Type 3 wildland fire engines, four reserve fire engines, one reserve fire truck, four reserve rescue ambulances, one small spill unit, one rehab unit, eight utility vehicles, eight Command Staff vehicles and nine Fire Prevention staff vehicles. The Fire Department’s responsibilities include fire suppression, expanded advanced life support and medical transportation, increased responses for hazardous materials and environmental monitoring, technical rescue operations including urban search and rescue, swift water rescue, confined space and trench rescue, disaster preparedness, public education, fire prevention and fire/arson investigation.

Fire Station No. 1 includes protection for the Old Towne Orange Historic District, Chapman University, and stretches of the State Route (SR) 55 and SR-22 freeways. Fire Station No. 1 serves as the Department's Headquarters, which has offices for the Command staff, Administrative staff, and Fire Prevention staff. It also has the provisions to operate as a backup Emergency Operations Center, Regional Occupational Program's Fire Program classroom; contains a mapping room for creating and maintaining the department's mapping system, a uniform storage room, self-contained breathing apparatus maintenance room, arson investigation lockup, and additional rooms that are used for equipment storage, rope storage, and sewing. A portable trailer, present on site, is used as a conference room for the Fire Department. Additionally, the Orange City Fire Department's stations, including the Fire Station No. 1 and Headquarters, provide coverage for each other and county-wide when resources are unavailable, based on availability and mutual agreements, respectively. The new Fire Headquarters and Fire Station No. 1 will accommodate the above mentioned existing facilities along with an exercise room, ready room, dorm spaces, study/library, turn-out room, extractor room, kitchen, training classroom, lockers, storage, and additional conference rooms.

A Non-Significant Environmental Impact Declaration form filed by the City of Orange in 1973 shows that the Project site historically housed State and County fire apparatus repair shops, warehouse, offices outfitting and storage buildings along with State Division of Forestry residences and gasoline and diesel dispensing pumps. The facility suffered destruction by fire in the late 1980s, which resulted in a hazardous material discharge (gasoline) in the site. Soil Vapor Extraction method was applied as a remedial measure to mitigate the negative impacts. Presently, the Project site has undergone hazardous material clean-up review to ensure no residual gasoline discharge is present on the site.

Project Description:

The Proposed Project includes Fire Station No. 1, which will be approximately 16,574 square feet in size, as well as an attached two-story Headquarters which will include approximately 11,353 square feet of space. The two-story Headquarters building would be 30 feet 8 inches in height, with its exhaust tower structure reaching a height of 33 feet 3 inches; the apparatus room of the Fire Station No. 1 would be 24 feet in height. In addition, the existing storage building located on the site will be retrofitted and refurbished and will provide approximately 3,780 square feet of space to serve as Reserve Apparatus storage for the new facility. The retrofitting would include replacement of the interior slab, reskinning the building exterior with new metal panels and addition of new lighting.

The Proposed Project will include the following components for Fire Station No. 1:

- Apparatus room with room for two engines, a truck, a rescue vehicle, and a battalion vehicle. The room will have three bays with shutters and three internal doors.
- Exercise room
- Fire station offices
- Ready room to allow for the crew and staff to quickly respond to the apparatus.
- Restrooms
- Dorm spaces
- Study/library
- Turn-out room to place turnout gear at the station prior to decontamination and be stored afterward

- Extractor room to house commercial grade washer-extractors and dryers dedicated to cleaning Personal Protective Equipment (PPE)
- Kitchen

The Proposed Project will include the following components for the Fire Headquarters:

- Administration space for the Headquarters including offices and workstations
- Training classroom
- Lockers
- Storage
- Conference rooms

The Proposed Project will have a Reserve Apparatus storage facility to store additional vehicles and for disaster equipment storage, proposed to be housed within the retrofitted storage building. The parking lot for the Proposed Project will be located across Water Street to the west and will consist of two ungated visitor spots, two automated security gates, and approximately 54 gated staff parking stalls. Both the main Project site and the parking site would have associated lighting and 6-foot high perimeter fencing, constructed of masonry and steel tubes. The wall on the east side of the proposed staff parking lot that is located on the southeast corner of the Fire Station site will be a 7.7-foot high concrete masonry unit wall. This will also function as a sound wall and any doors installed in the wall will be solid doors with self-closing hinges. Additionally, as a measure of sound proofing, a sound enclosure will be installed on the proposed emergency generator that is depicted in Figure 3. The Proposed Project would also include necessary utility upgrades including, but not limited to, sewer, stormwater, dry utilities and solid waste management.

Architecture

The architecture of the Orange Fire Station No. 1 and Headquarters has been designed to reflect the Spanish Revival style found throughout the Old Towne Orange Historic District (see Figure 5 and Figure 6, below). The two-story building would have an offset massing that steps back from the street as the building increases in height. The roof would be a combination of flat parapet areas flanked by low-sloped mansards. Concrete roofing tiles, designed to simulate clay, would be used on all sloped roof areas. The west side would feature a second-story arcade element and a heavy-timber pergola to help break up the massing. Window and door openings, with charcoal gray frames, would occur symmetrically at exterior planes, at regular intervals. The exterior finish is primarily composed of a smooth, cream-colored stucco, terracotta-colored brick veneer and cast concrete panels. Decorative wrought iron details, period style lighting, and a small tower element at the main entrance would help complete the historic styling.

Landscaping

All the existing trees would be retained and protected on site, including the pine tree at the parking site. Two Ficus trees on Chapman Avenue, however, would be removed. Once constructed, the site perimeter will be landscaped with trees and shrubs at appropriately regularly-spaced intervals. Trees include Magnolias at the Chapman Avenue-facing frontage, Natchez Crape Myrtle trees facing Water and Jameson Streets, Goldenrain trees at the visitor parking lot, and Brisbane Box trees between the site and southern boundary where the water yard begins. Shrubs include a variety mixed with accent plantings and groundcover as specified on the landscape plan.

Circulation and Parking

The Proposed Project intends to retain the existing circulation patterns (automobile and pedestrian) and sidewalks around the site. Currently, there are no existing or planned bicycle lanes or related facilities on Chapman Avenue or Water Street. The response driveway for Fire Station No. 1 will take access from Chapman Avenue. Stop signs and emergency warning systems will be installed along Chapman Avenue and Water Street to ensure safe egress from the site. The Fire Department vehicles will return to the station via Water Street and will stage to exit directly onto Chapman Avenue via the response driveway. Pedestrian access to Fire Station No. 1 and Headquarters will be located at the northeast corner of the building at the Chapman Avenue and Water Street intersection.

Staff and visitor vehicles would access the Fire Station No. 1 and Headquarters site off of Water Street. The Project facility would also have a gated staff parking and unsecured visitor parking accessible from Water Street. The parking site, located across Water Street from the main Project site, would have a secured entrance on Water Street, facing the Proposed Project site. The staff and visitors, using the associated parking lot, would make a pedestrian crossing over Water Street to gain access to the Fire Station No. 1 and Headquarters site. However, due to the residential and business nature of the land uses along Water Street, a vehicular speed limit of 25 mph and the street not being a busy thoroughfare, the Project does not assume a requirement for a signaled crosswalk.

Project Design Features:

Project Design Feature 1:

The Project applicant shall construct a minimum 7.7-foot concrete masonry unit wall that is depicted on the proposed site plan and is located on the east side of the proposed staff parking lot that is located on the southeast corner of the Fire Station Site. Any doors installed in the wall shall be solid doors with self-closing hinges.

Project Design Feature 2:

The Project applicant shall install a sound enclosure on the proposed emergency generator that is depicted on the proposed site plan. The sound enclosure shall be no less effective than a Level 1 Sound Enclosure provided by Generac.

Project Schedule:

The Proposed Project is expected to break ground in January 2021 and be completed by July 2022. Construction activities will take place between the hours of 7:00 a.m. and 8:00 p.m. on any day except for Sunday or a Federal holiday, or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday or a Federal holiday.

Construction Activities:

Once the Proposed Project has been approved by the City, Project construction activities could begin in January 2021 and take approximately 19 months. The site is currently graded with little to no vegetation on site.

Construction equipment to be used during construction of the Proposed Project include the following items:

- Loaders
- Pick-up trucks

- Backhoe
- Water Truck
- Crane
- Asphalt paver
- Excavators

Figure 1: Project Vicinity

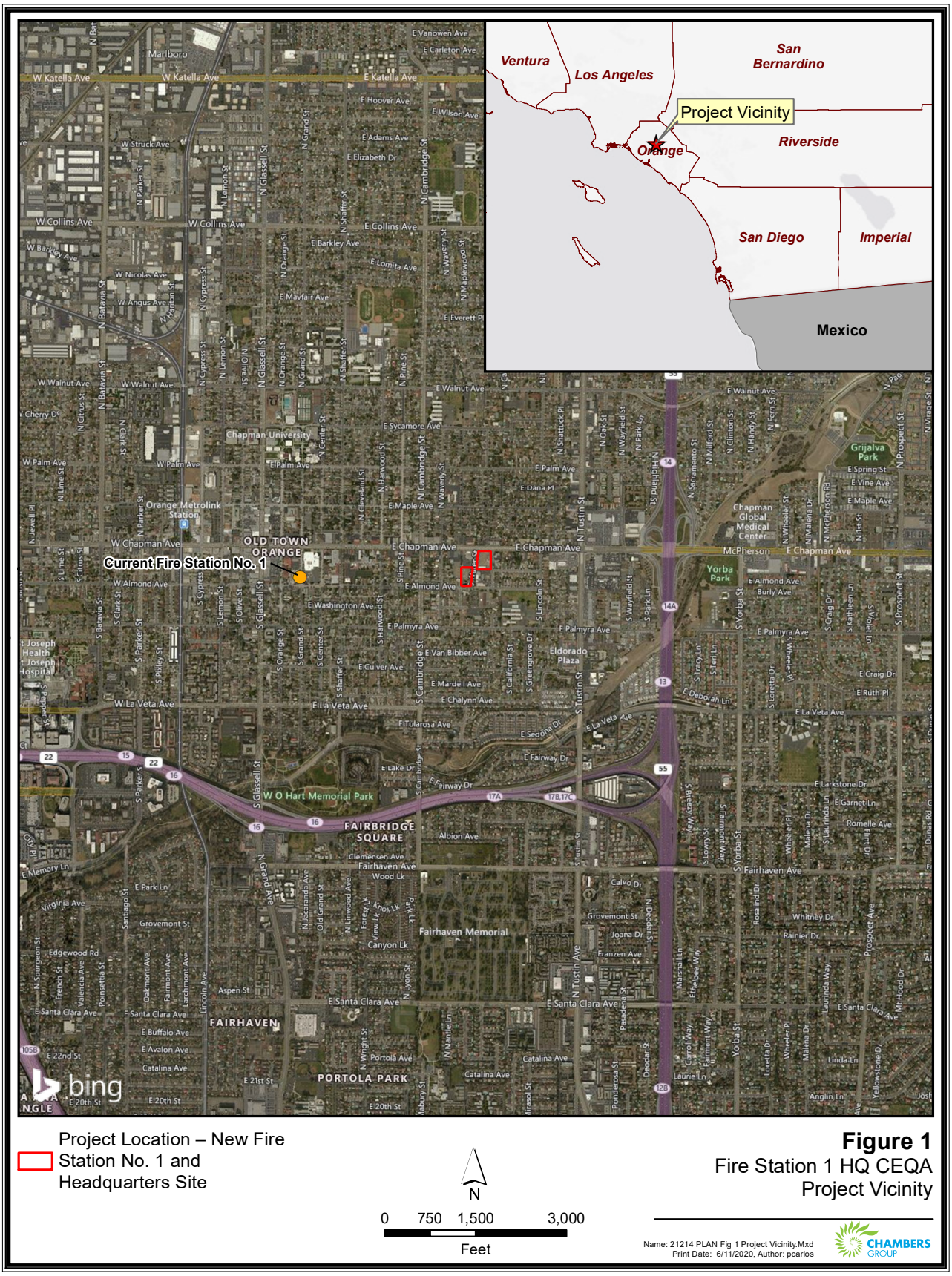


Figure 2: Project Location

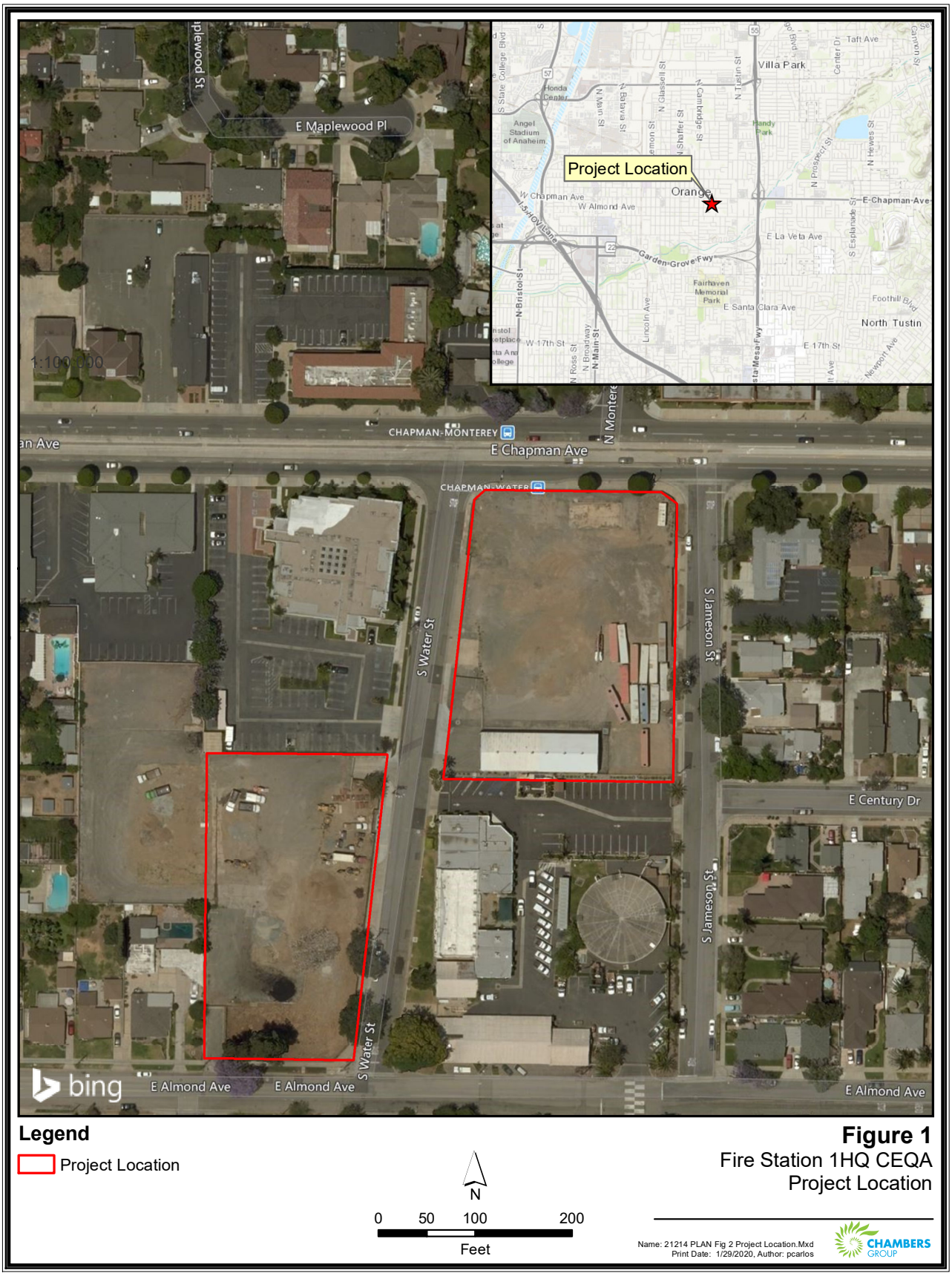
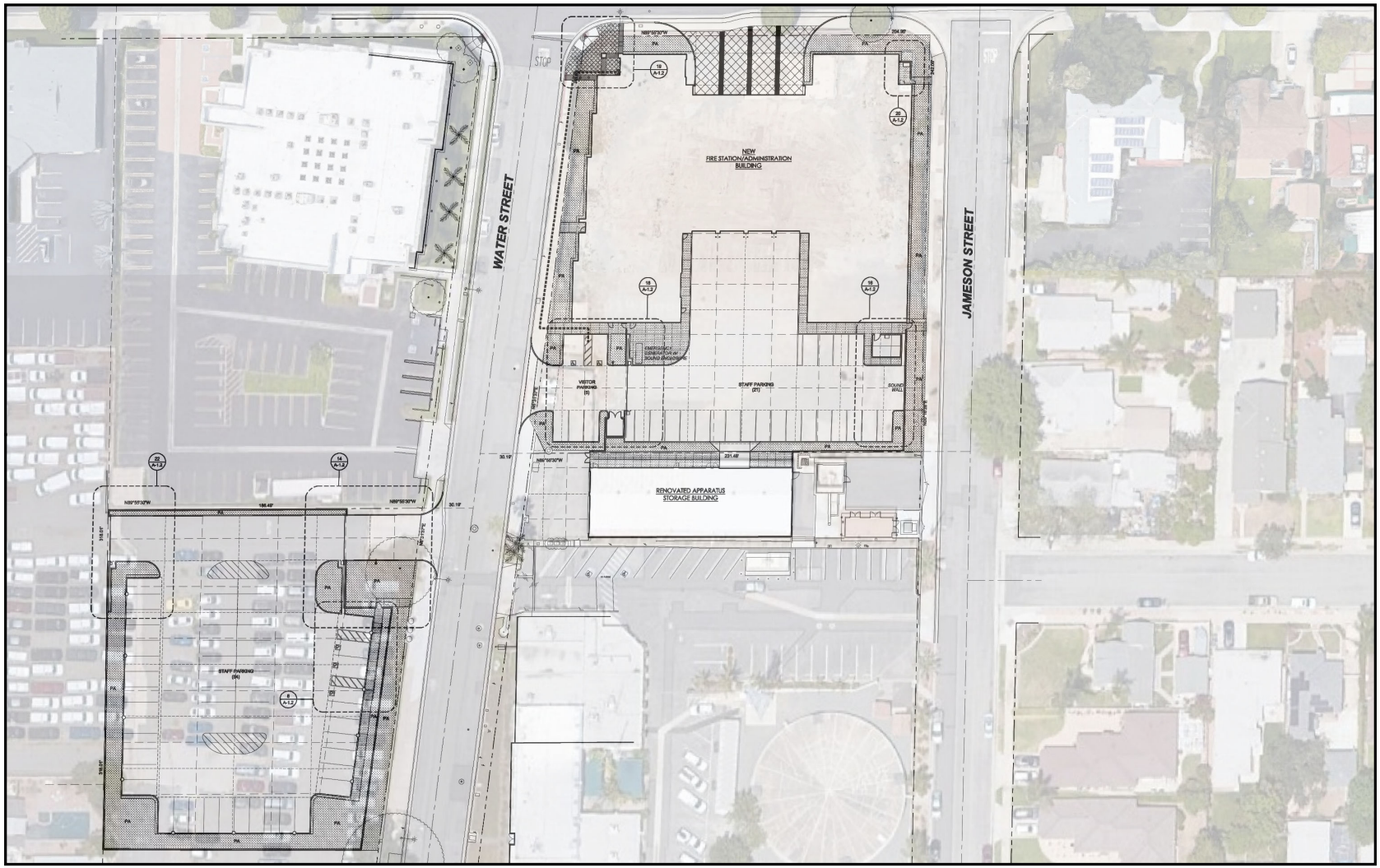


Figure 3: Project Site Plan



0 40 80 160 Feet

Figure 3
Fire Station 1HQ CEQA
Site Plan

Name: 21214 PLAN Fig 3 Site Plan.Mxd
Print Date: 6/2/2020, Author: pcarlos

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Figure 4: Parking Lot Plan

Figure 4
Fire Station 1HQ CEQA
Parking Lot Plan

0 30 60 120 Feet

Name: 21214 PLAN Fig 4 Parking Lot Plan.Mxd
Print Date: 1/30/2020, Author: pcarlos

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Figure 5: Elevation Drawings

Figure 5
Fire Station 1HQ CEQA
Proposed Elevations

Name: 21214 PLAN Fig 5 Proposed Elevations.Mxd
Print Date: 5/15/2020, Author: pcarlos

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Figure 6: Elevation Drawings (part 2)

Figure 6
Fire Station 1HQ CEQA
Proposed Elevations

Name: 21214 PLAN Fig 6 Proposed Elevations.Mxd
Print Date: 6/19/2020, Author: pcarlos

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REQUIRED AGENCY PERMITS, APPROVALS, AND COORDINATION:

The City of Orange (City) is the lead agency under the Calfornia Environmental Quality Act (CEQA), and is responsible for planning and implementing the Proposed Project. This environemntal document is intended to meet the requirements of CEQA for all discretionary actions taken by the City related to the Proposed Project including, but not limited to, approval of preliminary project plans, approval of final plans and specifications, authorization to bid the project for construction, and authorization to award the construction contract.

Because a project also involves approvals, permits or authorization from other agencies, these agencies are "Responsible Agencies" under CEQA. Section 15381 of the State CEQA Guidelines defines Responsible Agencies as public agencies other than the Lead Agency that will have discretionary approval power of a project, including mitigation.

No responsible or trustee agencies have been identified, as no other agency approvals are anticipated to be required due to Project implementation. Cooperating agencies include:

- City of Orange Fire Department – approval of site plan/access
- County of Orange Planning & Development – Tentative Parcel Map recording
- Regional Water Quality Control Board – approval of SWPPP

SCHEDULED PUBLIC MEETINGS OR HEARINGS:

Adjourned Regular Meeting of the Planning Commission:

- August 17, 2020
- 7:00 p.m. or as soon thereafter as the matter may be heard
- Please refer to the August 17, 2020, Planning Commission agenda to be posted on the City's website at www.cityoforange.org for location details and updates.

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" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture & Forest Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

DETERMINATION. On the basis of this initial evaluation:

1. I find that the Project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared. ☐

2. I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

3. I find the Proposed Project **may have a significant effect** on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required. ☐

4. I find that the Proposed Project **may have a "potentially significant impact" or "potentially significant unless mitigated impact"** 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. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed. ☐

5. I find that although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required. ☐

Eduardo Lopez, Senior Civil Engineer

6/24/2020

Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to Projects like the one involved (e.g., the Project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on Project-specific factors as well as general standards (e.g., the Project will not expose sensitive receptors to pollutants, based on a Project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as Project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced, as discussed below).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identity the following:

   a. Earlier Analysis Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a Project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   a. the significance criteria or threshold, if any, used to evaluate each question; and

   b. the mitigation measure identified, if any, to reduce the impact to less than significance.

CHECKLIST OF ENVIRONMENTAL IMPACT ISSUES:

1. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the Project:		Potentially Significant Impact	Less than Significant 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 public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning or other regulations governing scenic quality?	☐	☐	☒	☐
(d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Impact Analysis

a) The City of Orange General Plan characterizes portions of the City as scenic vistas that include hillsides, ridgelines, or open space areas that provide a unifying visual backdrop to the urban environment. These "viewsheds" contribute to the City's identity and quality of life. However, no such scenic vistas are identified in the immediate vicinity of the Proposed Project site (City of Orange 2010a). Views from the existing residents and businesses adjacent to the Proposed Project site is largely built out, fully urbanized, and consists mostly of one to two story residential, commercial, and institutional buildings. Thus, no significant impact to any scenic vistas are anticipated due to the construction and operation of the Proposed Project.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

b) There are no State scenic highways within the City of Orange; the City does not contain any designated scenic resources such as rock outcroppings or trees within or adjacent to a State scenic highway. Policy 7.2 of the Natural Resources Element of the City of Orange General Plan designates Santiago Canyon Road, to the east of Jamboree Road, as a City scenic highway (City of Orange 2010a). However, Santiago Canyon Road is approximately 4.5 miles away and out of the viewshed of the Proposed Project site. Furthermore, while the Proposed Project site is within 500 feet of the Old Towne Orange Historic District, the site itself is vacant except for an existing storage building and does not contain any designated historic structures (Google Map 2020). Potential impacts to historic structures on the Project site are analyzed in Section 5, Cultural Resources of this IS/MND. Additionally, no scenic rock outcroppings are located within the Project limits. No impact is anticipated.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

c) As discussed in Response 1(a), the Proposed Project site is located in an urbanized part of the City of Orange with no scenic vistas designated in its vicinity. Currently, the Project site is vacant except for an existing storage building, with sparse vegetation and the site of the future parking lot is currently operated as a combination asphalt and compacted gravel parking lot with no defined landscaping or lot demarcations. The construction of the Proposed Project would not degrade the existing visual character because the vacant parcels would be developed with structures consistent with surrounding uses and associated landscaping.

The Project site is located approximately 0.1 miles east of the Old Towne Orange Historic District. The architecture of the Proposed Project would be designed in a way to be harmonious with the architecture present in the Historic District and with the Historic Preservation Standards for Old Towne. As described in the Project Description of this document, the architecture of the Proposed Project has been designed to reflect the Spanish Revival style found throughout the Old Towne Orange Historic District. Further, the Proposed Project buildings would be congruous with the design guidelines established for the Old Towne Orange Historic District, and any other applicable regulations governing scenic quality to maintain visual consistency with the other buildings in the neighborhood. Based upon the proposed site design, the Project does not represent an adverse impact to the existing visual character and conditions of the surrounding area, and therefore would not degrade the visual character or quality of the surrounding area. Impacts would be less than significant.

Significance Determination: Less Than Significant.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant.

d) Existing light sources from the areas around the Proposed Project consist of lights from the vehicles, businesses and residences in the vicinity of the Project site. No lighting is currently located within the vacant main Project site parcel. Any lighting on that parcel would be spillover from neighboring buildings. The parking lot site currently functions as a parking area for the offices in the vicinity and consists of nominal associated lighting. During construction, the Proposed Project would generate light and glare from the presence and operation of vehicles and equipment. Construction would be scheduled between the hours of 7:00 a.m. and 8:00 p.m. on any day except for Sunday or a Federal holiday, or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday or a Federal holiday; no construction activities would occur during nighttime hours.

Once operational, the Proposed Project would include new permanent lighting from outdoor building lights and security lighting for the parking area. While the Proposed Project would include installation of new permanent lighting, this type of lighting would be consistent with lighting offered at the existing buildings within the area. The Proposed Project would comply with Orange Municipal Code (OMC), Section 17.12.030 (see below), which addresses general lighting guidelines for day and nighttime uses of buildings of all the districts and would include any shielding or barriers to minimize spill over into other businesses and residences. Impacts would be less than significant.

OMC Section 17.12.030 - Lighting.

> *A Lighting on any premises shall be directed, controlled, screened or shaded in such a manner as not to shine directly on surrounding premises. Furthermore, lighting on any residential property shall be controlled so as to prevent glare or direct illumination of any public sidewalk or thoroughfares.*

Significance Determination: Less Than Significant.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant.

2. AGRICULTURE & FOREST 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 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?	☐	☐	☐	☒

Impact Analysis:

a) The Farmland Mapping and Monitoring Program (FMMP) administered by the California Department of Conservation produces maps and statistical data to analyze impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status. The Proposed Project site is categorized as 'Urban and Built-Up Land' as part of the FMMP due to its location in an urban residential neighborhood in the City of Orange in Orange County (California Department of Conservation 2016). The California Department of Conservation defines 'Urban and Built-Up Land' as land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel including residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures. Thus, the Proposed Project would not convert Prime Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

b) The main Project site parcels, currently zoned Office Professional (O-P) and Single Family Residential (R-1-6), are proposed to be amended to Public Institution (P-I). The parking site is zoned

as Single Family Residential (R-1-6) and will retain the same designation throughout the Proposed Project activities. None of the parcels are in a Williamson Act contract or conflict with any existing agricultural use (City of Orange 2016). No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

c) The Proposed Project site, per the current zoning of O-P and R-1-6, is intended for the development of single-family residences and professional offices, with limited retail and service commercial uses, permitted only when clearly incidental to the permitted primary office use. After the proposed zoning amendment of the main Project site to Public Institution (P-I), the site will accommodate a wide range of public and quasi-public uses, conditional on its compatibility with its surrounding uses (City of Orange 2016). The parking site will remained zoned as R-1-6, and would not have any impact to zoned forest land or timberland. The site is not currently and will not, in the future, be zoned for forest land or timberland; the Proposed Project thus would not result in the conversion of any farmland or forest land to another use. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

d) As noted in Impact 2(c), the Proposed Project site, located in an urbanized neighborhood in the City, is currently zoned for single-family and professional office uses and will be zoned for public or quasi-public uses after the proposed zone change. Neither of the zoning districts account for forest land or timberland (City of Orange 2016). No forest land would be lost or converted to non-forest uses for the purpose of the Proposed Project. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

e) The Proposed Project includes Fire Station No. 1, which will be approximately 16,574 square feet in size, as well as a two-story Headquarters which will include approximately 11,353 square feet of space. In addition, an existing prefabricated steel storage building will be retrofitted, and will provide approximately 3,780 of Reserve Apparatus storage space. The Proposed Project buildings are sited on a currently vacant and graded City-owned lot, less than a mile away from the current Fire Department Headquarters. The Proposed associated parking is located at the site of an existing parking lot, across Water Street. No changes are anticipated in the existing environment during construction or operation, which could result in conversion of Farmland, to nonagricultural use or the conversion of forest land to non-forest use. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

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 With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
(b)	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?	☐	☐	☒	☐
(c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
(d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Introduction:
The following analysis is based on the technical air quality study prepared by Vista Environmental, dated June 22, 2020 (Appendix A).

Environmental Setting
The Proposed Project site is located in the City of Orange in Orange County. The Proposed Project site is located within the South Coast Air Basin (Air Basin), and air quality regulation is administered by the South Coast Air Quality Management District (SCAQMD). The SCAQMD implements the programs and regulations required by the federal and State Clean Air Acts.

Regulatory Setting
The Proposed Project site lies within the Air Basin, which is managed by the SCAQMD. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), inhalable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead. The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Areas are classified under the Federal Clean Air Act as either "attainment" or "nonattainment" areas for each criteria pollutant, based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The Air Basin has been designated by the Federal Environmental Protection Agency (EPA) as a nonattainment area for O_3 and $PM_{2.5}$. Currently, the Air Basin is in attainment with the NAAQS for CO, SO_2, NO_2, and PM_{10}. The Air Basin is designated as partial nonattainment for lead based on data from two source-specific monitors in Vernon and the City of Industry that are both near battery recycling facilities.

The EPA has designated the Air Basin as extreme nonattainment for the 8-hour average ozone standard. The SCAQMD, the agency principally responsible for comprehensive air pollution control in the Air Basin, adopted the 2016 Air Quality Management Plan (AQMP) in March 2016 that provides measures to reduce 8-hour ozone levels to below the federal standard by 2037.

Additionally, the EPA has designated the Air Basin as nonattainment for $PM_{2.5}$. $PM_{2.5}$ is a subset of the PM_{10} emissions whose standards were developed to complement the PM_{10} standards that cover a full range of inhalable particle matter. For the PM_{10} health standards, the annual PM_{10} standard was revoked by the EPA on October 17, 2006; and the 24-hour average PM_{10} attainment status for the Air Basin was redesignated to attainment (maintenance) on July 26, 2013.

The Air Basin has been designated by CARB as a nonattainment area for ozone, NO_2, PM_{10}, and $PM_{2.5}$. Currently, the Air Basin is in attainment with the State ambient air quality standards for CO, SO_2, and sulfates and is unclassified for visibility-reducing particles and hydrogen sulfide. The adopted AQMPs provide measures to meet the State standards for ozone, NO_2, PM_{10}, and $PM_{2.5}$. Table 1 presents the designations and classifications applicable to the Proposed Project area.

Table 1: South Coast Air Basin Attainment Status

Criteria Pollutant	Standard	Averaging Time	Designation[a)]	Attainment Date[b)]
1-Hour Ozone[c)]	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/6/2023 (revised deadline)
	CAAQS	1-Hour (0.09 ppm)	Nonattainment	N/A
8-Hour Ozone[d)]	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	8/3/2038
	NAAQS	2015 8-Hour (0.070 ppm)	Pending – Expect Nonattainment (Extreme)	Pending (beyond 2032)
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	Beyond 2032
CO	NAAQS	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
	CAAQS	1-Hour (20 ppm) 8-Hour (9 ppm)	Attainment	6/11/2007 (attained)
NO_2[e)]	NAAQS	2010 1-Hour (0.10 ppm)	Unclassifiable/ Attainment	N/A (attained)
	NAAQS	1971 Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	1-Hour (0.18 ppm) Annual (0.030 ppm)	Attainment	---
SO_2[f)]	NAAQS	2010 1-Hour (75 ppb)	Designations Pending (expect Unclassifiable/ Attainment)	N/A (attained)
	NAAQS	1971 24-Hour (0.14 ppm) 1971 Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (attained)
PM_{10}	NAAQS	1987 24-hour (150 µg/m^3)	Attainment (Maintenance)[g)]	7/26/2013 (attained)
	CAAQS	24-hour (50 µg/m^3) Annual (20 µg/m^3)	Nonattainment	N/A
$PM._{2.5}$[h)]	NAAQS	2006 24-Hour (35 µg/m^3)	Nonattainment (Serious)	12/31/2019
	NAAQS	1997 Annual (15.0 µg/m^3)	Attainment (final determination pending)	8/24/2016 (attained 2013)
	NAAQS	2012 Annual (12.0 µg/m^3)	Nonattainment (Moderate)	12/31/2021
	CAAQS	Annual (12.0 µg/m^3)	Nonattainment	N/A
Lead[i)]	NAAQS	2008 3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial) (Attainment determination requested)	12/31/2015

Source: Vista Environmental 2020

Notes:

a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable

b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration

c) The 1979 1-hour O_3 standard (0.12 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard and therefore has some continuing obligations with respect to the revoked standard
d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm. Effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour O_3 NAAQS (0.08 ppm) was revoked in the 2008 O_3 implementation rule, effective 4/6/15;there are continuing obligations under the revoked 1997 and revised 2008 O_3 until they are attained.
e) New NO_2 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO_2 standard retained
f) The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations are still pending, with Basin expected to be designated Unclassifiable /Attainment.
g) Annual PM10 standard was revoked, effective December 18, 2006; 24-hour PM10 NAAQS deadline was 12/31/2006; SCAQMD request for attainment redesignation and PM10 maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.
h) The attainment deadline for the 2006 24-Hour PM2.5 NAAQS was 12/31/15 for the former "moderate" classification; EPA approved reclassification to "serious", effective 2/12/16 with an attainment deadline of 12/31/19; the 2012 (proposal year) annual PM2.5 NAAQS was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m^3; new annual designations were final 1/15/15, effective 4/15/15; on July 25, 2016 EPA finalized a determination that the Basin attained the 1997 annual (15.0 µg/m^3) and 24-hour PM2.5 (65 µg/m^3) NAAQS, effective August 24, 2016
i) Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect to remain in attainment based on current monitoring data; attainment re-designation request pending.

Monitored Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Air Basin. The 2016 AQMP found that since 2012 AQMP Projections were made stationary source VOC emissions have decreased by approximately 12 percent, but mobile VOC emissions have increased by 5 percent. The percentage of NO_x emissions remain unchanged between the 2012 and 2016 Projections.

SCAQMD has divided the Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The Project site is located on the northwestern edge of Air Monitoring Area 21, which covers the southeastern portion of Orange County. The nearest air monitoring station to the Project site is the Anaheim-Pampas Lane Monitoring Station (Anaheim Station), which is located approximately 6.5 miles west of the Project site at 1630 Pampas Lane, Anaheim. The monitoring data is presented in Table 23 and shows the most recent three years of monitoring data from CARB. CO measurements have not been provided, since CO is currently in attainment in the Air Basin and monitoring of CO within the Air Basin ended on March 31, 2013.

Table 2: Local Area Air Quality Monitoring Summary

	Year[1]		
Pollutant (Standard)	**2016**	**2017**	**2018**
Ozone: [1]			
Maximum 1-Hour Concentration (ppm)	0.103	0.090	0.112
Days > CAAQS (0.09 ppm)	**2**	**0**	**1**
Maximum 8-Hour Concentration (ppm)	0.074	0.076	0.071
Days > NAAQS (0.070 ppm)	**4**	**4**	**1**
Days > CAAQs (0.070 ppm)	**0**	**2**	**0**
Nitrogen Dioxide: [1]			
Maximum 1-Hour Concentration (ppb)	64.3	81.2	66.0
Days > NAAQS (100 ppb)	0	0	0
Days > CAAQS (180 ppb)	0	0	0

Pollutant (Standard)	Year[1]		
	2016	2017	2018
Inhalable Particulates (PM10) :[1]			
Maximum 24-Hour National Measurement (ug/m^3)	74.0	95.7	94.6
Days > NAAQS (150 ug/m^3)	0	0	0
Days > CAAQS (50 ug/m^3)	**3**	**5**	**2**
Annual Arithmetic Mean (AAM) (ug/m^3)	28.0	26.9	27.7
Annual > NAAQS (50 ug/m^3)	No	No	No
Annual > CAAQS (20 ug/m^3)	**Yes**	**Yes**	**Yes**
Ultra-Fine Particulates (PM2.5):[1]			
Maximum 24-Hour National Measurement (ug/m^3)	44.4	53.9	63.1
Days > NAAQS (35 ug/m^3)	1	7	**7**
Annual Arithmetic Mean (AAM) (ug/m^3)	9.4	ND	12.3
Annual > NAAQS and CAAQS (12 ug/m^3)	No	ND	No

Source: Vista Environmental 2020

Notes: Exceedances are listed in **bold.** CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available.

[1] Data obtained from the Anaheim Station.

Impact Analysis:

a) The Proposed Project would not conflict with or obstruct implementation of the SCAQMD Air Quality Management Plan (AQMP). The following discussion elaborates on the Proposed Project's consistency with the SCAQMD AQMP.

SCAQMD Air Quality Management Plan

The purpose of this analysis is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the Proposed Project would interfere with the region's ability to comply with federal and State air quality standards. If the decision-makers determine that the Proposed Project is inconsistent, the lead agency may consider Project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant Projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the Project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the Project will exceed the assumptions in the AQMP, or increments based on the year of Project buildout and phase.

Both of these criteria are evaluated in the following sections:

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in Appendix A, short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance or local thresholds of significance. The ongoing operation of the Proposed Project would generate air pollutant emissions that are inconsequential on a regional basis and would not result in significant impacts based on SCAQMD thresholds of significance discussed. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be Projected to exceed the air quality standards. Therefore, a less than significant long-term impact would occur, and no mitigation would be required.

Therefore, based on the information provided above, the Proposed Project would be consistent with the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the Proposed Project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the Proposed Project are based on the same forecasts as the AQMP. The AQMP is developed through use of the planning forecasts provided in the Southern California Association of Government's (SCAG) Regional Transportation and Sustainable Communities Strategy (RTP/SCS) and the Federal Highway Administration's Federal Transportation Improvement Program (FTIP). The RTP/SCS is a major planning document for the regional transportation and land use network within Southern California. The RTP/SCS is a long-range plan that is required by federal and state requirements placed on SCAG, as the region's Metropolitan Planning Organization (MPO), and is updated every four years. The FTIP provides long-range planning for future transportation improvement Projects that are constructed with state and/or federal funds within Southern California. Local governments are required to use these plans as the basis of their plans for the purpose of consistency with applicable regional plans under CEQA. For this Project, the City of Orange General Plan's Land Use Plan defines the assumptions that are represented in AQMP.

The General Plan Land Use Element designation for the main Project site is Public Facilities and Institutions (PFI) and is currently zoned as Office Professional (O-P) and Single Family Residential (R-1-6). The parking site has a Low Density Residential (LDR) General Plan land use designation and is zoned Single Family Residential (R-1-6). The Proposed Project would include a zone amendment of the main Project site to Public Institution (P-I) to better reflect the existing nature of the land uses in the neighborhood and to ensure that the Proposed Project is consistent with the General Plan. Since the Proposed Project is an allowed land use under the current General Plan land use designation and zoning, the Proposed Project is consistent with the current land use designation and zoning and is not anticipated to exceed the AQMP assumptions for the Project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the Proposed Project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur in relation to implementation of the AQMP.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

b) The Proposed Project would not 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. The following section calculates the potential air emissions associated with the construction and operations of the Proposed Project and compares the emissions to the SCAQMD standards.

Construction Emissions

The construction activities for the Proposed Project are anticipated to include demolition and grading of both Project sites, building construction, paving of the onsite driveways, and parking lots, and application of architectural coatings. The construction emissions have been analyzed for both regional and local air quality impacts.

Construction-Related Regional Impacts

The CalEEMod model has been utilized to calculate the construction-related regional emissions from the Proposed Project and the input parameters utilized in this analysis have been detailed in Appendix A. The worst-case summer or winter daily construction-related criteria pollutant emissions from the Proposed Project for each phase of construction activities are shown below in Table 3 and the CalEEMod daily printouts are shown in Appendix A. Since it is possible that building construction, paving, and architectural coating activities may occur concurrently towards the end of the building construction phase, Table 3 also shows the combined regional criteria pollutant emissions from year 2022 building construction, paving and architectural coating phases of construction.

Table 3: Construction-Related Regional Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	PM2.5
Demolition[1]						
Onsite	1.99	19.70	14.49	0.02	1.86	1.10
Offsite	0.13	2.73	1.13	0.00	0.34	0.01
Total	**2.12**	**22.43**	**15.62**	**0.02**	**2.20**	**1.11**
Grading[1]						
Onsite	1.83	20.21	9.76	0..02	3.86	2.36
Offsite	0.06	0.59	0.45	0.00	0.15	0.04
Total	**1.89**	**20.80**	**10.21**	**0.00**	**4.01**	**2.40**
Building Construction (Year 2021)						
Onsite	2.05	16.03	14.56	0.03	0.82	0.78
Offsite	0.17	1.08	1.01	0.00	0.34	0.10
Total	**2.22**	**17.11**	**15.57**	**0.03**	**1.16**	**0.88**
Building Construction (Year 2022)						
Onsite	1.86	14.60	14.35	0.03	0.70	0.67
Offsite	0.12	1.03	0.00	0.00	0.34	0.09
Total	**1.98**	**15.63**	**14.35**	**0.03**	**1.04**	**0.76**
Paving						
Onsite	1.09	9.33	11.68	0.02	0.49	0.45
Offsite	0.05	0.03	0.43	0.00	0.04	0.05
Total	**1.14**	**9.36**	**12.11**	**0.02**	**0.53**	**0.50**
Architectural Coating						
Onsite	13.31	1.41	1.81	0.00	0.08	0.08
Offsite	0.02	0.01	0.14	0.00	0.06	0.02
Total	**13.33**	**1.42**	**1.95**	**0.00**	**0.14**	**0.10**
Combined Building Construction (Year 2022), Paving and Architectural Coatings						

Activity	Pollutant Emissions (pounds/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	PM2.5
Onsite	16.26	25.34	27.84	0.05	1.27	1.20
Offsite	0.36	2.15	1.58	0.00	0.78	0.26
Total	**16.62**	**27.49**	**29.42**	**0.05**	**2.05**	**1.46**
Maximum Daily Construction Emissions	**16.62**	**27.49**	**29.42**	**0.05**	**4.01**	**2.40**
SCQAMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Source: Vista Environmental 2020

Notes:

[1] Demolition and Grading based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.

[2] Onsite emissions from equipment not operated on public roads.

[3] Offsite emissions from vehicles operating on public roads.

Table 3 shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds during either demolition, grading, or the combined building construction, paving and architectural coatings phases. Therefore, a less than significant regional air quality impact would occur from construction of the Proposed Project.

Construction-Related Local Impacts

Construction-related air emissions may have the potential to exceed the State and federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin.

The local air quality emissions from construction were analyzed through utilizing the methodology described in Localized Significance Threshold Methodology (LST Methodology), prepared by SCAQMD, revised October 2009. The LST Methodology found the primary criteria pollutant emissions of concern are NO_x, CO, PM_{10}, and $PM_{2.5}$. In order to determine if any of these pollutants require a detailed analysis of the local air quality impacts, each phase of construction was screened using the SCAQMD's Mass Rate LST Look-up Tables. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily onsite emissions of CO, NO_x, PM_{10}, and $PM_{2.5}$ from the Proposed Project could result in a significant impact to the local air quality.

Table 4 shows the onsite emissions from the CalEEMod model for the different construction phases and the calculated localized emissions thresholds that have been detailed in Section 8.2 of Appendix A. Since it is possible that building construction, paving, and architectural coating activities may occur concurrently towards the end of the building construction phase, Table 4 also shows the combined local criteria pollutant emissions from year 2022 building construction, paving and architectural coating phases of construction.

Table 4: Construction-Related Local Criteria Pollutant Emissions

Phase	Pollutant Emissions (pounds/day)[1]			
	NOx	CO	PM_{10}	PM2.5
Demolition[2]	20.04	14.63	1.90	1.10
Grading[2]	20.28	9.82	3.88	2.37
Building Construction (Year 2021)	16.17	14.69	0.86	0.79
Combined Building Construction (Year 2021), Paving and Architectural Coatings	25.61	28.04	1.37	1.23
Maximum Daily Construction Emissions	***20.28***	***14.63***	***3.88***	***2.37***

Phase	Pollutant Emissions (pounds/day)[1]			
	NOx	CO	PM_{10}	PM2.5
SCAQMD Local Construction Thresholds[3]	**115**	**715**	**6**	**4**
Exceeds Threshold?	No	No	No	No

Source: Vista Environmental 2020.

Notes:

[1] The Pollutant Emissions include 100% of the On-Site emissions (off-road equipment and fugitive dust) and 1/8 of the Off-Site emissions (on road trucks and worker vehicles), in order to account for the on-road emissions that occur within a ¼ mile of the Project site.

[2] Demolition and Grading phases based on adherence to fugitive dust suppression requirements from SCAQMD Rule 403.

[3] The nearest offsite sensitive receptors are homes located 60 feet (18 meters) east of the Main Project site and 30 feet (9 meters) southwest of the parking site. According to SCAQMD methodology, all receptors closer than 25 meters are based on the 25 meter threshold.

The data provided in Table 4 shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds during either demolition, grading, or the combined building construction, paving, and architectural coatings phases. Therefore, a less than significant local air quality impact would occur from construction of the Proposed Project.

Operational Emissions

The on-going operation of the Proposed Project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the Project-generated vehicle trips, emissions from energy usage, onsite area source emissions created from the on-going use of the Proposed Project, and from the proposed 125 kilowatt backup diesel generator. The following section provides an analysis of potential long-term air quality impacts due to regional air quality and local air quality impacts with the on-going operations of the Proposed Project.

Operations-Related Regional Criteria Pollutant Analysis

The operations-related regional criteria air quality impacts created by the Proposed Project have been analyzed through use of the CalEEMod model and the input parameters utilized in this analysis have been detailed in Section 8.1 of Appendix A. The worst-case summer or winter VOC, NO_x, CO, SO_2, PM_{10}, and $PM_{2.5}$ daily emissions created from the Proposed Project's long-term operations have been calculated and are summarized below in Table 5 and the CalEEMod daily emissions printouts are shown in Appendix A.

The data provided in Table 5 shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the Proposed Project.

Table 5: Operational Regional Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM_{10}	PM2.5
Area Sources[1]	0.72	0.00	0.01	0.00	0.00	0.00
Energy Usage[2]	0.01	0.07	0.06	0.00	0.01	0.01
Mobile Sources[3]	1.71	4.87	8.08	0.01	0.49	0.14
Backup Generator[4]	0.16	0.44	0.40	0.00	0.02	0.02
Total Emissions	**2.60**	**5.38**	**8.55**	**0.01**	**0.52**	**0.17**
SCQAMD Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM_{10}	PM2.5

Source: Vista Environmental 2020.

Notes:

[1] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

[2] Energy usage consist of emissions from natural gas usage.

[3] Mobile sources consist of emissions from vehicles and road dust.

[4] Backup Generator based on a 125 kW (190 Horsepower) diesel generator that has a cycling schedule of 30 minutes per week.

In *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 (also referred to as *"Friant Ranch"*), the California Supreme Court held that when an EIR concluded that when a project would have significant impacts to air quality impacts, an EIR should "make a reasonable effort to substantively connect a Project's air quality impacts to likely health consequences." In order to determine compliance with this Case, the Court developed a multi-part test that includes the following:

1) The air quality discussion shall describe the specific health risks created from each criteria pollutant, including diesel particulate matter.

Appendix A details the specific health risks created from each criteria pollutant discussed in Section 4.1 and specifically in Table B of Appendix A. In addition, the specific health risks created from diesel particulate matter is detailed in Section 2.2 of Appendix A. As such, this analysis meets the part 1 requirements of the *Friant Ranch* Case.

2) The analysis shall identify the magnitude of the health risks created from the Project. The Ruling details how to identify the magnitude of the health risks. Specifically, on page 24 of the ruling it states "The Court of Appeal identified several ways in which the EIR could have framed the analysis so as to adequately inform the public and decision makers of possible adverse health effects. The County could have, for example, identified the Project's impact on the days of nonattainment per year."

Table 5 above shows that the primary source of operational air emissions would be created from mobile source emissions that would be generated throughout the Air Basin. As such, any adverse health impacts created from the Proposed Project should be assessed on a basin-wide level. As indicated in Appendix A, the Air Basin has been designated by EPA for the national standards as a non-attainment area for ozone, $PM_{2.5}$, and partial non-attainment for lead. In addition, PM_{10} has been designated by the State as non-attainment. It should be noted that VOC and NO_x are ozone precursors, as such they have been considered as non-attainment pollutants. According to the 2016 AQMP, in 2016 the total emissions of: VOC was 500 tons per year; NO_x was 522 tons per year; SO_x was 18 tons per year; and $PM_{2.5}$ was 66 tons per year. Since the 2016 AQMP did not calculate total PM_{10} emissions, the total PM_{10} emissions were obtained from The California Almanac of Emissions and Air Quality 2013 Edition, prepared by CARB, for the year 2020. The Project contribution to each criteria pollutant in the South Coast Air Basin is shown in Table 6.

Table 6: Project's Contribution to Criteria Pollutants in the South Coast Air Basin

Emissions Source	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM_{10}	PM2.5
Project Emissions[1]	2.60	5.38	8.55	0.01	0.52	0.17
Total Emissions in Air Basin[2]	1,000,000	1,044,000	4,246,000	36,000	322,000	132,000

Emissions Source	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM_{10}	PM2.5
Project's Percent of Air Emissions	**0.0003%**	**0.0005%**	**0.0002%**	**0.00003%**	**0.0002%**	**0.0001%**
SCQAMD Operational Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

Source: Vista Environmental 2020.

Notes:

[1] From the Project's total operational emissions shown above in Table 5.

[2] VOC, NOx, CO, SO_2 and PM2.5 from 2016 AQMP and PM10 from the California Almanac of Emissions and Air Quality 2013 Edition.

As shown in Table 6, the Project would increase criteria pollutant emissions by as much as 0.0005 percent for NO_x in the South Coast Air Basin. Due to these nominal increases in the Air Basin-wide criteria pollutant emissions, no increases in days of non-attainment are anticipated to occur from operation of the Proposed Project. As such, this analysis meets the part 2 requirements of the *Friant Ranch* Case and therefore no further analysis is required. Therefore, operation of the Project is not anticipated to result in a quantitative increase in premature deaths, asthma in children, days children will miss school, asthma-related emergency room visits, or an increase in acute bronchitis among children due to the criteria pollutants created by the Proposed Project. Impacts would be less than significant.

Operations-Related Local Air Quality Impacts

Project-related air emissions may have the potential to exceed the State and federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. The Proposed Project has been analyzed for the potential local CO emission impacts from the Project-generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analyzes the vehicular CO emissions and local impacts from on-site operations.

Local CO Hotspot Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with Project CO levels to the State and Federal CO standards of 20 ppm over one hour or 9 ppm over eight hours.

At the time of the 1993 Handbook, the Air Basin was designated nonattainment under the CAAQS and NAAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Air Basin and in the state have steadily declined. According to the SCAQMD Air Quality Data Tables, in 2007 Central Orange County had maximum CO concentrations of 4.0 ppm for 1 hour and 2.9 ppm for 8-hours and in 2018 Central Orange County had maximum CO concentrations of 2.3 ppm for 1-hour and 1.9 ppm for 8-hours, which represent decreases in CO concentrations of 43 percent and 34 percent, respectively between 2018 and 2007. In 2007, the Air Basin was designated in attainment for CO under both the CAAQS and NAAQS. SCAQMD conducted a CO hot spot analysis for attainment at the busiest intersections in Los Angeles during the peak morning and afternoon periods and did not predict a violation of CO standards. Since the nearby intersections to the Proposed Project are much smaller with less traffic than what was analyzed by the SCAQMD and since the CO concentrations are now at least 34 percent lower than when CO was designated in attainment in 2007, no local CO Hotspot are

anticipated to be created from the Proposed Project and no CO Hotspot modeling was performed. Therefore, a less than significant long-term air quality impact is anticipated to local air quality with the on-going use of the Proposed Project.

Local Criteria Pollutant Impacts from Onsite Operations

Project-related air emissions from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances may have the potential to create emissions areas that exceed the State and Federal air quality standards in the Project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin.

The local air quality emissions from onsite operations were analyzed using the SCAQMD's Mass Rate LST Look-up Tables and the methodology described in LST Methodology. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NO_x, PM_{10}, and $PM_{2.5}$ from the Proposed Project could result in a significant impact to the local air quality. Table 7 shows the onsite emissions from the CalEEMod model that includes area sources, energy usage, and vehicles operating in the immediate vicinity of the Project site and the calculated emissions thresholds.

Table 7: Operations-Related Local Criteria Pollutant Emissions

Onsite Emission Source	Pollutant Emissions (pounds/day)			
	NOx	CO	PM_{10}	PM2.5
Area Sources	0.00	0.01	0.00	0.00
Energy Usage	0.07	0.06	0.01	0.01
Mobile Sources	0.61	1.01	0.06	0.02
Backup Generator	0.44	0.40	0.02	0.02
Total Emissions	**1.12**	**1.48**	**0.09**	**0.05**
SCAQMD Local Operational Thresholds[1]	**115**	**715**	**2**	**1**
Exceeds Threshold?	No	No	No	No

Source: Vista Environmental 2020.

Notes:

[1] The nearest offsite sensitive receptors are homes located 60 feet (18 meters) east of the Main Project site and 30 feet (9 meters) southwest of the parking site. According to SCAQMD methodology, all receptors closer than 25 meters are based on the 25 meter threshold.

The data provided in Table 7 shows that the on-going operations of the Proposed Project would not exceed the local NO_x, CO, PM_{10} and $PM_{2.5}$ thresholds of significance discussed in Appendix A. Therefore, the on-going operations of the Proposed Project would create a less than significant operations-related impact to local air quality due to onsite emissions and no mitigation would be required.

Therefore, the Proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

c) The Proposed Project would not expose sensitive receptors to substantial pollutant concentrations. The local concentrations of criteria pollutant emissions produced in the nearby vicinity of the Proposed

Project, which may expose sensitive receptors to substantial concentrations have been calculated in Appendix A for both construction and operations, which are discussed separately below. The discussion below also includes an analysis of the potential impacts from toxic air contaminant emissions. The nearest sensitive receptors to the Main Project site are homes located on the east side of Jameson Street, which are as near as 60 feet east of the Main Project site. The nearest sensitive receptors to the parking site are homes located as near as 30 feet southwest of the parking site.

Construction-Related Sensitive Receptor Impacts

The construction activities for the Proposed Project are anticipated to include anticipated to include demolition and grading of both Project sites, building construction, paving of the onsite driveways and parking lots, and application of architectural coatings. Construction activities may expose sensitive receptors to substantial pollutant concentrations of localized criteria pollutant concentrations and from toxic air contaminant emissions created from onsite construction equipment, which are described below.

Local Criteria Pollutant Impacts from Construction

The local air quality impacts from construction of the Proposed Project has been analyzed in Section 10.3 of Appendix A and found that the construction of the Proposed Project would not exceed the local NO_x, CO, PM_{10} and $PM_{2.5}$ thresholds of significance discussed in Section 9.2 of Appendix A. Therefore, construction of the Proposed Project would create a less than significant construction-related impact to local air quality and no mitigation would be required.

Toxic Air Contaminants Impacts from Construction

The greatest potential for toxic air contaminant emissions would be related to diesel particulate matter (DPM) emissions associated with heavy equipment operations during construction of the Proposed Project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. It should be noted that the most current cancer risk assessment methodology recommends analyzing a 30 year exposure period for the nearby sensitive receptors (OEHHA, 2015).

Given the relatively limited number of heavy-duty construction equipment, the varying distances that construction equipment would operate to the nearby sensitive receptors, and the short-term construction schedule, the Proposed Project would not result in a long-term (i.e., 30 or 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. In addition, California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 regulates emissions from off-road diesel equipment in California. This regulation limits idling of equipment to no more than five minutes, requires equipment operators to label each piece of equipment and provide annual reports to CARB of their fleet's usage and emissions. This regulation also requires systematic upgrading of the emission Tier level of each fleet, and currently no commercial operator is allowed to purchase Tier 0 or Tier 1 equipment and by January 2023 no commercial operator is allowed to purchase Tier 2 equipment. In addition to the purchase restrictions, equipment operators need to meet fleet average emissions targets that become more stringent each year between years 2014 and 2023. As of January 2019, 25 percent or more of all contractors' equipment fleets must be Tier 2 or higher. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the Proposed Project. As such, construction of the Proposed Project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Operations-Related Sensitive Receptor Impacts

The on-going operations of the Proposed Project may expose sensitive receptors to substantial pollutant concentrations of local CO emission impacts from the Project-generated vehicular trips and from the potential local air quality impacts from onsite operations. The following analyzes the vehicular CO emissions. Local criteria pollutant impacts from onsite operations, and toxic air contaminant impacts.

Local CO Hotspot Impacts from Project-Generated Vehicle Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential impacts to sensitive receptors. The analysis provided in Response 3(b) shows that no local CO Hotspots are anticipated to be created at any nearby intersections from the vehicle traffic generated by the Proposed Project. Therefore, operation of the Proposed Project would result in a less than significant exposure of offsite sensitive receptors to substantial pollutant concentrations.

Local Criteria Pollutant Impacts from Onsite Operations

The local air quality impacts from the operation of the Proposed Project would occur from onsite sources such as architectural coatings, landscaping equipment, and onsite usage of natural gas appliances. The analysis provided in Response 3(b) found that the operation of the Proposed Project would not exceed the local NO_x, CO, PM_{10} and $PM_{2.5}$ thresholds of significance. Therefore, the on-going operations of the Proposed Project would create a less than significant operations-related impact to local air quality due to on-site emissions and no mitigation would be required.

Operations-Related Toxic Air Contaminant Impacts

Particulate matter (PM) from diesel exhaust is the predominant toxic air contaminants (TAC) in most areas and according to The California Almanac of Emissions and Air Quality 2013 Edition, prepared by CARB, about 80 percent of the outdoor TAC cancer risk is from diesel exhaust. Some chemicals in diesel exhaust, such as benzene and formaldehyde have been listed as carcinogens by State Proposition 65 and the Federal Hazardous Air Pollutants program. Due to the nominal number of diesel truck trips that are anticipated to be generated by the Proposed Project, a less than significant TAC impact would occur during the on-going operations of the Proposed Project and no mitigation would be required.

Operation of the Proposed Project would create TAC emissions from operation of a 250 kilowatt (389 horsepower) backup diesel generator equipped with a diesel particulate filter (DPF) that will limit DPM created from the backup generator. Backup generators typically cycle on for 30 minutes on a weekly basis in order to keep the engine lubricated and ready to use in case of a power outage. The typical cycling of a backup generator would operate for approximately 26 hours per year. SCAQMD Rule 1110.2 exempts emergency standby generators that operate less than 200 hours per year from obtaining an air permit. The SCAQMD has developed the operating hour exemption limits based on levels that were determined to result in the generation of inconsequential emissions from backup generators. As such, the cancer risk created from the backup generator's TAC emissions to the nearby sensitive receptors is anticipated to be negligible. Therefore, through adherence to the backup generator operating time limits detailed in Rule 1110.2, less than significant long-term toxic air contaminant impacts would occur during operation of the Proposed Project.

Therefore, operation of the Proposed Project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

d) The Proposed Project would not create objectionable odors affecting a substantial number of people. Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the Project site and is typically presented as the mean (or 50 percent of the population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration. Potential odor impacts have been analyzed separately for construction and operations below.

Construction-Related Odor Impacts
Potential sources that may emit odors during construction activities include the application of coatings such as asphalt pavement, paints and solvents and from emissions from diesel equipment. The objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the Project site's boundaries. Due to the transitory nature of construction odors, a less than significant odor impact would occur and no mitigation would be required.

Operations-Related Odor Impacts
Potential sources of odor emission during operation of the Proposed Project would include diesel emissions from the fire trucks and backup generator as well as odors from trash storage areas. All fire trucks that operate on the Project site will be required to meet State emissions standards that require the use of diesel particulate filters that would minimize odors created from the fire trucks. The operation of the backup diesel generator would be limited to 200 hours or less per year and would include an exhaust stack with a diesel particulate filter that would limit the exhaust and associated odors created from the generator to negligible levels. Pursuant to City regulations, permanent trash enclosures that protect trash bins from rain as well as limit air circulation would be required for the trash storage areas. Due to the distance of the nearest sensitive receptor from the Project site and through compliance with SCAQMD's rules that include Rule 402 (odor regulations) and Rule 1110.2 (backup generator regulations) and the City's trash storage regulations, a less than significant impact related to odors would occur during the on-going operations of the Proposed Project. Operational-related odor impacts would be less than significant, and no mitigation would be required.

Therefore, a less than significant odor impact would occur and no mitigation would be required.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

4. BIOLOGICAL RESOURCES

Would the Project:

		Potentially Significant Impact	Less than Significant 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 state or federally protected wetlands (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?	☐	☐	☐	☒

Impact Analysis:

a) The Project site is currently zoned as Office Professional (O-P) and Single Family Residential (R-1-6) and the parking site is zoned as Single Family Residential (R-1-6). After the proposed zoning change, included as a part of the Project, the main Project site will be zoned as Public Institutional (P-I). The zoning of the parking site will remain unchanged. The sites are located in an urbanized area of the City and are surrounded by the City of Orange Water Division, residential and office buildings. The main Project site is fenced, graded and consists of dirt, sand, gravel, sparse vegetation, and trash and debris. Due to the urban nature of the area and fact that the site is graded and vacant, the Proposed Project site is not expected to be a suitable habitat to house any sensitive or special status species.

While the site is not considered to be suitable habitat, it is possible that birds may use the existing vegetation, surrounding the parking site, for potential nesting. The Proposed Project would attempt to avoid vegetation removal activities during nesting season (February to September). However, mitigation measure BIO-1 has been included to minimize any potential impacts to nesting birds during construction due to their potential presence in vacant and urban environments.

Although only a few small trees and a small number of shrubs were observed on the site of the parking lot and sparse vegetation on the site of the fire station and headquarters, the Proposed Project has the potential to disturb ground-nesting birds and birds nesting in trees located in the buffer area of the sites. All trees located within the main Project site and parking site would be protected in place; however, two Ficus trees would be removed along Chapman Avenue. Implementation of mitigation measure BIO-1 would reduce impacts on nesting birds to a level less than significant and comply with

the Migratory Bird Treaty Act which protects the removal of listed migratory birds or their parts such as eggs and nests from private property.

BIO-1: **Nesting Birds.** If Project clearing and construction must occur during the avian nesting season (February 1 to September 1), a survey for active nests must be conducted by a qualified biologist one to two weeks prior to the activities to determine the presence/absence, location, and status of any active nests on or adjacent to the Project site. If no active nests are discovered or identified, no further mitigation is required. In the event that active nests are discovered on site, a suitable buffer determined by the qualified biologist (e.g., 30 to 50 feet for passerines) should be established around such active nests. No ground-disturbing activities shall occur within this buffer until the biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Limits of construction to avoid a nest site shall be established in the field by a qualified biologist with flagging and stakes or construction fencing. Construction personnel shall be instructed regarding the ecological sensitivity of the fenced area. The results of the survey shall be documented and filed with the Community Development Director within five days after the survey.

With implementation of mitigation measure BIO-1, impacts would be less than significant.

Significance Determination: Potentially Significant Impact.
Mitigation Measures: BIO-1.
Significance Determination After Mitigation: Less Than Significant Impact with Mitigation Incorporated.

b) The Proposed Project site does not include riparian habitat, wetlands, or a sensitive natural community and is currently graded and vacant (USFWS 2020). The Proposed Project site and surrounding areas are urban, predominantly built out and consist primarily of residential and office buildings. Therefore, impacts to riparian or sensitive habitats is not expected.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

c) According to the U.S. Fish and Wildlife Service National Wetland Inventory Map, the Proposed Project is not located on any protected wetlands or areas that appear to contain wetlands, marshes, or vernal pools (USFWS 2020). No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

d) The Proposed Project is located in an urbanized area primarily surrounded by residential and office uses. As discussed in Response 4(a), the Proposed Project is not expected to be a suitable habitat that would house any sensitive or special status species. No water bodies are present that can provide an adequate habitat for migratory fish. The area is not designated for a wildlife nursery site. The two Proposed Project sites are not a designated habitat for any endangered species or any species of concern.

While the Proposed Project is not found to contain suitable habitat for migratory species, the Proposed Project has the potential to disturb ground-nesting birds and birds nesting in trees located in the buffer area of the Project site. Implementation of mitigation measure BIO-1 would reduce impacts on nesting birds to a level less than significant and comply with the Migratory Bird Treaty Act which protects the removal of listed migratory birds or their parts such as eggs and nests from private property.

Implementation of BIO-1 would result in less than significant impacts to trees and migratory wildlife with mitigation incorporated.

Significance Determination: Potentially Significant Impact.
Mitigation Measures: BIO-1.
Significance Determination After Mitigation: Less Than Significant Impact with Mitigation Incorporated.

e) While little to no vegetation exists on the graded Project site, a few trees and shrubs were observed on the site of the proposed parking lot. However, the Proposed Project design, including the landscaping for the associated parking lot, does not require the removal of any trees on site during construction; only two Ficus trees would be removed along Chapman Avenue. However, the removal will be undertaken only after coordination with the Community Services Department and Public Works Department.

Although there is a possibility of the Proposed Project conflicting with a local ordinances related to preservation of biological resources, such as street trees, coordination with staff from Community Services and Public Works Departments that have arboricultural expertise reduces any potential impacts to a less than significant level.

Significance Determination: Less than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

f) As noted in Response 4(a), the Proposed Project site is not expected to include suitable habitat that would house any sensitive or special status species. The Proposed Project sites are within an area primarily for residential, office and institutional uses; the area is not designated as, nor would it be considered, a suitable habitat for species or for conservation uses. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

5. CULTURAL RESOURCES

Would the Project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	☐	☐	☒	☐
(b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
(c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Impact Analysis:

a) The Proposed Project site is not located within any of the City of Orange's historic districts, but is located approximately 0.1 miles east of the Old Towne Orange Historic District boundary (City of Orange 2010e). As discussed in Response 1(c), the Proposed Project architecture would be congruous with the design guidelines established for the Old Towne Orange Historic District. The Proposed Project site is not listed as a Designated Historic Resources in the General Plan (City of Orange 2010e). The main Project site is currently graded and vacant with the exception of an existing storage building. The storage building is constructed of masonry and wood framing covered by corrugated metal panels. It does not contain any distinct architectural features and is not constructed in any particular architectural style relevant to a period of significance to the City. The parking site currently operates as an existing parking lot and does not contain any built features onsite. Therefore, considering the Proposed Project site does not involve direct impacts to any historical resources, less than significant impacts are anticipated.

Significance Determination: Less than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less than Significant Impact.

b) The fire station lot of the Proposed Project site has been previously graded and developed, and the parking site currently has a combination asphalt and compacted gravel surface. Further, the areas surrounding the Proposed Project are fully developed and ground disturbing activities have occurred through the installation of building foundations and utility lines. The Proposed Project would not include grading that would extend in depths reaching native soils. The depth of disturbance would be approximately 5-6 feet below existing grade at the buildings. Any grading that would occur would be within depths where previous utility lines would be located during the development of the surrounding areas.

Figure 5.5-2 (Historical Archaeological Sensitivity) of the City's General Plan EIR notes that a Farmstead Development (1870s-1920) has been identified in the area of the Project site. Due to the historic settlement of the Project area and vicinity, there is the potential to encounter buried cultural material associated with early 20 century development. In addition, the Project area was inhabited prehistorically, and is located approximately 0.5 miles northwest of Santiago Creek. Because prehistoric settlements typically occurred in proximity to natural waterways, there is also the potential for encountering buried prehistoric cultural resources during construction excavation.

As such, it is possible that unknown archaeological resources could exist at the Project site and could be encountered during ground-disturbing activities associated with Project construction. If proper care

is not taken, significant impacts to unknown archaeological resources could occur. However, the Project Applicant would be required to implement Mitigation Measure CUL-1, which provides direction for the proper recordation of previously undiscovered archaeological resources, should such resources be found during Project construction activities. Implementation of Mitigation Measure CUL-1 would ensure that the Project would not cause a substantial adverse change in significance of an archaeological resource pursuant to State CEQA Guidelines §15064.5. Therefore, with mitigation, Project impacts related to archaeological resources would be less than significant.

CUL-1: In the event a potentially significant cultural resource is encountered during earthwork activities, as determined by the foreperson, qualified Native American Monitor, qualified archaeologist, or any City official, all subsurface construction activities within a 100-foot radius of the find shall cease and workers shall avoid altering the materials until a qualified archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology has evaluated the situation. The City of Orange Public Works Department shall include a standard inadvertent discovery clause in the construction contract to inform contractors of this requirement. Any resources found during construction activities shall expeditiously be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA Guidelines Section 15064.5, the qualified archaeologist shall expeditiously prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant in accordance with Section 15064.5 of the CEQA Guidelines. The archaeologist shall also expeditiously perform appropriate technical analyses, prepare a comprehensive report complete with methods, results, and recommendations, and provide for the permanent curation or repatriation of the recovered resources in cooperation with the designated most likely descendant as needed. The report shall be submitted to the City of Orange Community Development Department, the South Central Coastal Information Center, and the State Historic Preservation Office (SHPO), if required.

Significance Determination: Potentially Significant Impact.
Mitigation Measures: CUL-1
Significance Determination After Mitigation: Less Than Significant Impact.

c) There are no known cemeteries located within the Proposed Project site. The areas surrounding the Proposed Project are fully developed and ground disturbing activities have occurred through the installation of building foundations, as well and installation of utility lines to service the area. However, because resources are often buried and not easily identifiable, the Proposed Project would be subject to local, State, and federal regulations if any cultural resources, including human remains, are identified. In accordance with the State's Health and Safety Code Section 7050.5, in the event of discovery or recognition of any human remains at the Project site, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains will occur until the Orange County Coroner has determined, in accordance with Chapter 10 (commencing with Section 27460) or Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner, and cause of any death, and the

recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. As a result, impacts would be less than significant based on compliance with existing regulations.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

6. ENERGY

Would the Project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	☐	☐	☒	☐
(b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

The following analysis is based on the technical energy usage study prepared by Vista Environmental, dated June 22, 2020 (Appendix A).

Impact Analysis:

a) The Proposed Project would impact energy resources during construction and operation. Energy resources that would be potentially impacted include electricity, natural gas, and petroleum based fuel supplies and distribution systems. This analysis includes a discussion of the potential energy impacts of the Proposed Project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The following analysis calculates the potential energy consumption associated with the construction and operations of the Proposed Project and provides a determination if any energy utilized by the Proposed Project is wasteful, inefficient, or unnecessary consumption of energy resources.

Electricity is provided to the Project Site by Southern California Edison (SCE). Natural gas is provided to the Project Site by The Southern California Gas Company (SoCalGas). Both forms of energy are provided to the Project Site via existing infrastructure located adjacent to the site. The Project would be served by this infrastructure and would not require the need for new, expanded, or relocated energy infrastructure.

Construction Energy

The construction activities for the Proposed Project are anticipated to include demolition and grading of both Project sites, building construction, paving of the onsite driveways and parking lots, and application of architectural coatings. The Proposed Project would consume energy resources during construction in three general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the Project Site, construction worker travel to and from the Project Site, as well as delivery and haul truck trips (e.g. hauling of demolition material to off-site reuse and disposal facilities).
2. Electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power; and,
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Construction-Related Electricity

During construction, the Proposed Project would consume electricity to construct the new structures and infrastructure. Electricity would be supplied to the Project site by SCE and would be obtained

from the existing electrical lines in the vicinity of the Project site. The use of electricity from existing power lines rather than temporary diesel or gasoline powered generators would minimize impacts on energy use. Electricity consumed during Project construction would vary throughout the construction period based on the construction activities being performed. Various construction activities include electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power. Such electricity demand would be temporary, nominal, and would cease upon the completion of construction. Overall, construction activities associated with the Proposed Project would require limited electricity consumption that would not be expected to have an adverse impact on available electricity supplies and infrastructure. Therefore, the use of electricity during Project construction would not be wasteful, inefficient, or unnecessary.

Since there are power poles running along the east side of the Project site, it is anticipated that only nominal improvements would be required to SCE distribution lines and equipment with development of the Proposed Project. Where feasible, the new service installations and connections would be scheduled and implemented in a manner that would not result in electrical service interruptions to other properties. Compliance with City guidelines and requirements would ensure that the Proposed Project fulfills its responsibilities relative to infrastructure installation, coordinates any electrical infrastructure removals or relocations, and limits any impacts associated with construction of the Project. Construction of the Project's electrical infrastructure is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity.

Construction-Related Natural Gas

Construction of the Proposed Project typically would not involve the consumption of natural gas. Natural gas would not be supplied to support construction activities, thus there would be no demand generated by construction. Since the Project site is currently developed that currently has natural gas service to the Project site, construction of the Proposed Project would be limited to installation of new natural gas connections within the Project site. Development of the Proposed Project would likely not require extensive infrastructure improvements to serve the Project site. Construction-related energy usage impacts associated with the installation of natural gas connections are expected to be confined to trenching in order to place the lines below surface. In addition, prior to ground disturbance, the Proposed Project would notify and coordinate with SoCalGas to identify the locations and depth of all existing gas lines and avoid disruption of gas service. Therefore, construction-related impacts to natural gas supply and infrastructure would be less than significant.

Construction-Related Petroleum Fuel Use

Petroleum-based fuel usage represents the highest amount of transportation energy potentially consumed during construction, which would utilized by both off-road equipment operating on the Project site and on-road automobiles transporting workers to and from the Project site and on-road trucks transporting equipment and supplies to the Project site.

The off-road construction equipment fuel usage was calculated through use of the off-road equipment assumptions and fuel use assumptions shown in Section 8.3 of Appendix A, which found that the off-road equipment utilized during construction of the Proposed Project would consume 39,727 gallons of fuel. The on-road construction trips fuel usage was calculated through use of the construction vehicle trip assumptions and fuel use assumptions shown in Section 8.3 of Appendix A, which found that the on-road trips generated from construction of the Proposed Project would consume 8,064 gallons of

fuel. As such, the combined fuel used from off-road construction equipment and on-road construction trips for the Proposed Project would result in the consumption of 47,787 gallons of petroleum fuel.

Construction activities associated with the Proposed Project would be required to adhere to all State and SCAQMD regulations for off-road equipment and on-road trucks, which provide minimum fuel efficiency standards. As such, construction activities for the Proposed Project would not result in the wasteful, inefficient, and unnecessary consumption of energy resources. Impacts regarding transportation energy would be less than significant. Development of the Project would not result in the need to manufacture construction materials or create new building material facilities specifically to supply the Proposed Project. It is difficult to measure the energy used in the production of construction materials such as asphalt, steel, and concrete, it is reasonable to assume that the production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business.

Operational Energy

The on-going operation of the Proposed Project would require the use of energy resources for multiple purposes including, but not limited to, heating/ventilating/air conditioning (HVAC), refrigeration, lighting, appliances, and electronics. Energy would also be consumed during operations related to water usage, solid waste disposal, landscape equipment and vehicle trips.

Operations-Related Electricity

Operation of the Proposed Project would result in consumption of electricity at the Project site. As detailed in Section 8.3 of Appendix A, the Proposed Project would consume 375,876 kilowatt-hours per year of electricity. It should be noted that, the Proposed Project would comply with all federal, State, and City requirements related to the consumption of electricity, including California Code of Regulations (CCR) Title 24, Part 6 Building Energy Efficiency Standards and CCR Title 24, Part 11: California Green Building Standards. The CCR Title 24, Part 6 and Part 11 standards require numerous energy efficiency measures to be incorporated into the proposed buildings, including enhanced insulation, use of energy efficient lighting and appliances as well as requiring a variety of other energy-efficiency measures to be incorporated into all of the proposed structures. Therefore, it is anticipated the Proposed Project will be designed and built to minimize electricity use and that existing and planned electricity capacity and electricity supplies would be sufficient to support the Proposed Project's electricity demand. Thus, impacts with regard to electrical supply and infrastructure capacity would be less than significant and no mitigation measures would be required.

Operations-Related Natural Gas

Operation of the Proposed Project would result in increased consumption of natural gas at the Project site. As detailed in Section 8.3 of Appendix A, the Proposed Project would consume 40 MBTU per year of natural gas. It should be noted that, the Proposed Project would comply with all federal, State, and City requirements related to the consumption of natural gas, including CCR Title 24, Part 6 Building Energy Efficiency Standards and CCR Title 24, Part 11: California Green Building Standards. The CCR Title 24, Part 6 and Part 11 standards require numerous energy efficiency measures to be incorporated into the proposed structures, including enhanced insulation as well as use of efficient natural gas appliances and HVAC units. Therefore, it is anticipated the Proposed Project will be designed and built to minimize natural gas use and that existing and planned natural gas capacity and natural gas supplies would be sufficient to support the Proposed Project's natural gas demand. Thus, impacts with regard to natural gas supply and infrastructure capacity would be less than significant and no mitigation measures would be required.

Operations-Related Vehicular Petroleum Fuel Usage

Operation of the Proposed Project would result in increased consumption of petroleum-based fuels related to vehicular travel to and from the Project site. As detailed in Section 8.3 of Appendix A, the Proposed Project would consume 6,305 gallons of petroleum fuel per year from vehicle travel and 385 gallons of diesel per year from the operation of the backup generator. It should be noted that, the Proposed Project would comply with all federal, State, and City requirements related to the consumption of transportation energy, including California Code of Regulations Title 24, Part 11 California Green Building Standards that require the proposed project to provide both long-term and short-term bicycle parking spaces that will promote the use of alternative transportation. Therefore, it is anticipated the Proposed Project will be designed and built to minimize transportation energy through the promotion of the use of alternative transportation and it is anticipated that existing and planned capacity and supplies of transportation fuels would be sufficient to support the Proposed Project's demand. Thus, impacts with regard transportation energy supply and infrastructure capacity would be less than significant and no mitigation measures would be required.

In conclusion, the Proposed Project would comply with regulatory compliance measures outlined by the State and City related to Air Quality, Greenhouse Gas Emissions (GHG), Transportation/Circulation, and Water Supply. Additionally, the Proposed Project would be constructed in accordance with all applicable Building and Fire Codes. Therefore, the Proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

b) The Proposed Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The applicable energy plan for the Proposed Project is the City of Orange General Plan, March 2010, that provides an Energy Resources Component. The Proposed Project's consistency with the applicable energy-related policies in the General Plan are shown in Table 8.

Table 8: Proposed Project Compliance with City General Plan Energy Policies

General Plan Energy Policy	Proposed Project Consistency with General Plan Policies
Natural Resources Element Goal 2.0: Protect air, water, and energy resources from pollution and overuse.	**Consistent.** The Proposed Project would not overuse air, water, and energy resources.
Policy 2.1: Cooperate with the South Coast Air Quality Management District (SCAQMD) and other regional agencies to implement and enforce regional air quality management plans.	**Consistent.** The Proposed Project is consistent with the SCAQMD air quality management plan.
Policy 2.2: Support alternative transportation modes, alternative technologies, and bicycle- and pedestrian-friendly neighborhoods to reduce emissions related to vehicular travel.	**Consistent.** The Proposed Project has a bus stop on the Project site that would promote the use of alternative transportation to the Project.
Policy 2.6: Encourage sustainable building and site designs for new construction and renovation Projects.	**Consistent.** The Proposed Project has taken into account site designs for sustainability.
Policy 2.7: Coordinate with energy suppliers to ensure adequate energy supplies to meet community needs, and to promote energy conservation and public education	**Not Applicable.** This policy is only applicable to the City to work with energy suppliers.

General Plan Energy Policy	Proposed Project Consistency with General Plan Policies
programs for that purpose.	
Policy 2.9: Promote City operations as a model for energy efficiency and green building.	**Consistent.** The Proposed Project has been designed to meet green building standards.
Policy 2.10: Work toward replacing existing City vehicles with ultra low or zero emission vehicles. At a minimum, new City vehicles shall be low emission vehicles as defined by the California Air Resources Board, except if certain vehicle types are not available in the marketplace. Public safety vehicles are exempted from this requirement.	**Not Applicable.** This is a City requirement for City vehicles to be ultra low to zero emissions vehicles, which is not a part of the Project.
Infrastructure Element Goal 3.0: Ensure adequate maintenance of public rights-of-way to enhance public safety and improve circulation.	**Not Applicable.** This is a City requirement; however the Project does provide adequate rights-of-way.
Policy 3.4: Investigate the feasibility of using energy-efficient street lights to conserve energy.	**Not Applicable.** This is a City requirement to place energy efficient street lights.
Infrastructure Element Goal 4.0: Ensure adequate provision of electricity, natural gas, telephone and data services and cable television.	**Consistent.** The Proposed Project has been designed to ensure adequate capacity of electricity, natural gas, data and cable television can be supplied to the Project.
Policy 4.4: Encourage integrated and cost-effective design and technology features within new development to minimize demands on dry utility networks.	**Consistent.** The Proposed Project will be constructed using the most current design and technologies for dry utility networks.

Source: Vista Environmental 2020.

As shown in Table 8, the Proposed Project would be consistent with all applicable energy-related policies provided in the City's General Plan. Therefore, the Proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

7. GEOLOGY AND SOILS

Would the Project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) 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 direct or indirect 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?	☐	☐	☒	☐
(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

The following analysis is based on the technical geotechnical investigation prepared by Leighton Consulting, dated September 26, 2019 (Appendix B).

Impact Analysis:

a) i) As noted in the Public Safety Element of the City of Orange General Plan, no known Alquist-Priolo fault zone is located in the City. A geotechnical investigation of the site (Appendix B) revealed that the closest known active or potentially active faults are the Elysian Park Blind Thrust and the Puente Hills Blind Thrust fault systems, located approximately 9 miles northwest of the Proposed Project site. However, due to the fact that no active faults traverse the site and the site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone, the potential risk for surface fault rupture through the site is considered low (Leighton 2019). Due to its location in Southern California, a seismically active region, it is highly likely that regional earthquakes might occur that could affect the Proposed Project site.

However, in accordance with the City of Orange requirements, the Project Applicant would comply with any recommendations made in a final Geotechnical Exploration Report that addresses the final design of the Project. Additionally, all structures and onsite facilities would be designed in accordance with all applicable current codes and standards utilizing the appropriate seismic design parameters to reduce seismic risk as defined by California Geological Survey Chapter 2 of Special Publication 117A and the most current edition of the California Building Code. Therefore, considering that the Project site is not located within an Alquist-Priolo Earthquake Fault Zone and would comply with all local and

State requirements, the potential impacts due to rupture of a known earthquake fault would be less than significant.

Significance Determination: Less Than Significant.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant.

a) ii) As noted in the Public Safety Element, the City of Orange is vulnerable to ground shaking caused by seismic events along large regional faults in the area, including the Newport-Inglewood Fault, the Elsinore Fault, and the San Andreas Fault. These faults, along with its associated fault zones, has the potential to cause widespread seismic movements in the City. A geotechnical investigation of the site (Appendix B) revealed that the closest known active or potentially active faults are the Elysian Park Blind Thrust and the Puente Hills Blind Thrust fault systems, located approximately 9 miles northwest of the Proposed Project site. The potential for ground shaking within the City depends on the distance to the fault and the intensity of a specific seismic event along the fault. The Public Safety Element describes two potential events of an 8.3 Richter Magnitude earthquake along San Andreas Fault and a 7.5 Richter Magnitude earthquake along Newport-Inglewood Fault. The Proposed Project site is approximately 1 to 2 miles away from the nearest potential ground shaking boundaries in the respective cases; it is assumed that the sites would be exposed to ground shaking during the event of a comparable earthquake along these faults (City of Orange 2010b). However, in accordance with the City of Orange requirements, the Project Applicant would comply with any recommendations made in a final Geotechnical Exploration Report that addresses the final design of the Project. In addition, all structures and onsite facilities would be designed in accordance with the California Geological Survey and California Building Code seismic safety standards to minimize the hazards from earthquakes and other seismic activities. Since the design and construction of the Proposed Project would be required to conform to the specific mandated structural design requirements to protect against strong seismic shaking, the potential impacts due to strong seismic ground shaking are less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

a) iii) Liquefaction occurs when moisture-saturated soils lose stability during seismic conditions. Structures built on such soils may collapse and could potentially result in damage and loss. However, the Proposed Project site is not located within a liquefaction zone (California Department of Conservation 2020). Further, the geotechnical investigation concluded that the potential for liquefaction at the site is very low due to the nature of the onsite soils, and the groundwater depth (deeper than 50 feet) (Leighton 2019). As noted above, as a protective measure from injury and structural damage caused by geologic and seismic hazards, all new development will abide by the applicable California Geological Survey and California Building Code safety standards along with the most recently adopted City and State seismic and geotechnical requirements. Therefore, the Proposed Project would result in no impact to the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

a) iv) Landslides can occur when strong ground movement such as an earthquake shakes loose soil and causes land and debris to lose stability and slide. However, the Proposed Project site is not located within a landslide zone (California Department of Conservation 2020). Landslide potential in the area of the site is further considered low as it is relatively flat. Therefore, the Proposed Project would result in no impact to the risk of loss, injury, or death involving landslides.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

b) Construction, grading, and excavation activities would expose areas of the 2.75 acre Project site to the erosional effects of wind or water for a protracted period of time. Development of the Proposed Project would include construction activities that would expose soils and could potentially result in substantial erosion. Excavation would be limited to that necessary for the installation of building foundations and utilities. All grading activities require adherence to the City's grading ordinance, which include requirements and standards designed to limit potential impacts to acceptable levels. During construction, the Project would be required by to prevent the transport of sediments from the Project Site through stormwater runoff and winds through the use of appropriate Best Management Practices (BMPs).

Furthermore, the State Water Resources Control Board (SWRCB) adopted a National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). To obtain coverage under the Construction General Permit, a Project Applicant must submit various documents, including a Notice of Intent and a Stormwater Pollution Prevention Plan (SWPPP). Activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as grubbing or excavation. The purpose of the SWPPP is to identify sources of sediment and other pollutants that could affect the quality of stormwater discharges and to describe and ensure the implementation of Best Management Practices (BMPs) to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges resulting from construction activity. Potential BMPs for construction activities that could be used during the Project's construction phase include but are not limited to silt fencing, fiber rolls, hydraulic mulch, velocity dissipation device, and construction waste management. With the implementation of the NPDES regulations, Project impacts related to soil erosion would be less than significant.

Operation of the Proposed Project would not cause substantial soil erosion, since the Proposed Project design would include appropriate drainage systems and landscaping to ensure no soil erosion results from Project operation involving the use of water. Thus, this impact, due to the implementation of the Proposed Project, is considered less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

c) Lateral spreading is defined as landslides that occur on gentle slopes caused by earthquake-induced liquefaction. Subsidence occurs when a sudden sinking of the ground's surface occurs. The Proposed Project site is identified to be located within an area prone to subsidence due to groundwater pumping (USGS 2020). However, any extraction activities, that could result in subsidence, are not proposed as a part of the Project-related activities. The construction activities planned as a part of the Proposed

Project would follow applicable California Geological Survey and California Building Code safety guidelines to avoid the possibility of any subsidence in the area. Further, as discussed in Responses 7(a)(iii) and (iv), the Proposed Project site is not located within a liquefaction zone or a landslide zone; no significant impact is anticipated.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

d) A near-surface soil sample from the Proposed Project site was tested for expansion index as a part of a geotechnical investigation (Appendix B). Based on these test results, the near surface soil is expected to have a very low expansion potential. Given the developed and urban character of the City, no significant adverse constraints related to expansive soils are anticipated. The Proposed Project would not create substantial direct or indirect risks to life or property. All structures and onsite facilities would be designed in accordance with the California Geological Survey and California Building Code seismic safety standards to minimize the hazards from earthquakes and other seismic activities. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

e) The City of Orange Public Works Department, Water Division is responsible for the local network of sewer collection systems throughout the City, and in collaboration with Orange County Sanitation District (OCSD) is responsible for the treatment of residential, commercial and industrial sewage in Orange (City of Orange 2010c). The Proposed Project site relies on sewers for wastewater disposal. While the Proposed Project buildings include the construction of kitchen and bathroom facilities for the employees which would increase the generation of wastes and wastewater, the Proposed Project would tie into existing network lines and would not require the installation of septic tanks or other alternative systems. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

f) The City's General Plan does not identify the Proposed Project site as an area anticipated to contain any unique geologic features or known paleontological resources. However, per mitigation measure GEO-1, in the event that any paleontological resources are encountered during the course of Project development, all construction activity must temporarily cease in the affected area(s) until the uncovered resources are properly assessed by a qualified paleontologist and subsequent recommendations for appropriate documentation and conservation are evaluated by the Lead Agency. With implementation of Mitigation Measure GEO-1, impacts would be less than significant.

GEO-1 In the event a previously unrecorded paleontological deposit is encountered during construction; all activity shall cease in the vicinity of the find and redirected elsewhere, and the City shall be immediately informed of the discovery. A paleontologist shall be retained by the City to make recommendations on the treatment of the deposits. The recommendations shall be developed in accordance with applicable provisions of Public Resource Code Section 21083.2 and State CEQA Guidelines 15126.4. The City shall be

consulted on the treatment of the deposits. The City shall follow all recommendations made by the paleontologist. The deposits shall not be disturbed or removed until the appropriate treatment has be recommended by the paleontologist and approved by the City. No construction activity in the vicinity of the find, the boundary of which shall be determined by the paleontologist, may resume until the recommendations for treatment of the deposits have been implemented. If applicable, the final report containing site forms, site significance, and mitigation measures shall be submitted to the Community Development Department when finalized. The final written report shall be submitted to the appropriate regional paleontological Information Center within three months after work has been completed.

Significance Determination: Potentially Significant Impact.
Mitigation Measures: GEO-1.
Significance Determination After Mitigation: Less Than Significant Impact.

8. GREENHOUSE GAS EMISSIONS

Would the Project:

		Potentially Significant Impact	Less than Significant 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?	☐	☐	☒	☐

The following analysis is based on the technical greenhouse gas emissions study prepared by Vista Environmental, dated June 22, 2020 (Appendix A).

Impact Analysis:

a) The Proposed Project would not generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment. The regulatory setting related to global climate change is addressed through the efforts of various international, federal, state, regional and local government agencies. These agencies work jointly, as well as individually, to reduce GHG emissions through legislation, regulations, planning, policy-making, education and a variety of programs. The agencies responsible for global climate regulations are discussed in detail in Section 6.0 of Appendix A.

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases, play a critical role in Earth's radiation amount by trapping infrared radiation from Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to the reference gas, CO_2. The GHGs listed by the International Panel on Climate Change (IPCC) and the CEQA Guidelines are discussed in this section in order of abundance in the atmosphere. To simplify reporting and analysis, GHGs are commonly defined in terms of their GWP. The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO_2e. As such, the GWP of CO_2 is equal to 1.

The Proposed Project would consist of development of the proposed Fire Station No. 1 and Headquarters. The Project site is located within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). In order to identify the significance criteria under CEQA for development projects, SCAQMD initiated a Working Group, which provided detailed methodology for evaluating significance under CEQA. At the September 28, 2010 Working Group meeting, SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 3,000 $MTCO_2e$ for all land use projects.

The Proposed Project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste disposal, water usage, backup generator, and construction equipment. The Project's GHG emissions have been calculated with the CalEEMod model based on the construction and operational parameters detailed in Section 8.1 of Appendix A. A summary of the results is shown below in Table 9 and the CalEEMod model run is provided in Appendix A.

Table 9: Project Related Greenhouse Gas Annual Emissions

	Greenhouse Gas Emissions (Metric Tons per Year)			
Category	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Area Sources[1]	0.00	0.00	0.00	0.00
Energy Usage[2]	134.18	0.01	0.00	134.69
Mobile Sources[3]	128.14	0.01	0.00	128.45
Backup Generator[4]	1.88	0.00	0.00	1.89
Solid Waste[5]	3.00	0.18	0.00	7.42
Water and Wastewater[6]	34.25	0.17	0.01	39.73
Construction[7]	5.05	0.00	0.00	15.12
Total GHG Emissions	**306.50**	**0.37**	**0.01**	**327.30**
SCAQMD Draft Threshold of Significance				**3,000**
Exceed Thresholds?				**No**

Source: Vista Environmental 2020

Notes:

[1] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscaping equipment.

[2] Energy usage consists of GHG emissions from electricity and natural gas usage.

[3] Mobile sources consist of GHG emissions from vehicles.

[4] Backup Generator based on a 125 kW (190 Horsepower) diesel generator that has a cycling schedule of 30 minutes per week.

[5] Waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.

[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

[7] Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009.

The data provided in Table 9 shows that the Proposed Project would create 327.30 $MTCO_2e$ per year. According to the SCAQMD draft threshold of significance detailed in Section 9.6 of Appendix A, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations would exceed 3,000 $MTCO_2e$ per year.

Therefore, a less than significant generation of greenhouse gas emissions would occur from development of the Proposed Project. Impacts would be less than significant.

Significance Determination: Less than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less than Significant Impact.

b) The Proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. The Proposed Project consists of the development of the proposed Fire Station No. 1 and Headquarters. As detailed in Response 8(a), the Proposed Project is anticipated to create 327.30 $MTCO_2e$ per year, which is well below the SCAQMD draft threshold of significance of 3,000 $MTCO_2e$ per year. The SCAQMD developed this threshold through a Working Group, which also developed detailed methodology for evaluating significance under CEQA. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 3,000 $MTCO_2e$ for all land use type Projects, which was based on substantial evidence supporting the use of the recommended thresholds. Therefore, the Proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Significance Determination: Less than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less than Significant Impact.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the Project:

		Potentially Significant Impact	Less than Significant 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 complied 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 or excessive noise for people residing or working in the Project area?	☐	☐	☐	☒
(f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
(g)	Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Impact Analysis:

a) The construction activities for the Proposed Project would involve the transport, use, and disposal of hazardous materials. Typical hazardous materials handled during construction include grease, lubricants, fuels, solvents, and aerosols. The Proposed Project would comply with the applicable regulations relating to transporting, using, and disposing of such materials. In addition, the proposed construction activities would be temporary until the end of construction. Thus, it would not create a significant hazard to the public or environment. During operation, Fire Station No. 1 and Headquarters would comply with regulated usage of hazardous materials typically found in fire stations and associated facilities. Such chemicals are already used at the existing facility, approximately 0.5 miles west of the Proposed Project site, and would be handled, stored, and disposed of in accordance with applicable regulations and under Fire Department guidelines. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

b) While the Proposed Project will utilize potentially hazardous materials during construction, the transport, use, and disposal of such materials will abide by applicable regulations that will reduce the likelihood of an accidental release that would create a significant hazard to the public. Typical hazardous materials found in fire stations and associated facilities, will be handled, stored, and disposed of in accordance with applicable regulations and under Fire Department guidelines. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.

Significance Determination After Mitigation: Less Than Significant Impact.

c) The Proposed Project site is located within a quarter mile (approximately 1,000 feet) away from the Palmyra Elementary School (Google Map 2020). The Proposed Project would involve the use of heavy equipment during construction that would emit emissions associated with internal combustion engines, i.e., diesel and gasoline. Once operational, the Proposed Project would involve the use of chemicals associated with fire station operations which would be subject to federal, State, and local health and safety requirements. As discussed above in Response 9(b), adherence to all local, County, State, and federal policies and regulations would reduce impacts to a level less than significant. Therefore, implementation of the Proposed Project would result in less than significant impacts associated with hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

d) The main Project site, as noted in the Project background, historically housed State and County fire apparatus repair shops, warehouse, offices outfitting and storage buildings along with State Division of Forestry residences and gasoline and diesel dispensing pumps. The facility suffered destruction by fire in the late 1980s, which resulted in a hazardous material discharge (gasoline) in the site. Soil Vapor Extraction method was applied as a remedial measure to mitigate the negative impacts. Presently, the Project site has undergone hazardous material clean-up review to ensure no residual gasoline discharge is present in the site. Thus, a review of federal and State standard and supplemental databases indicated that the two Proposed Project sites are not located within any identified hazardous material site pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or environment (DTSC 2020). No impacts are expected.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

e) The Proposed Project site is located approximately 7.7 miles to the north of the John Wayne Airport in Orange County and outside of the airport's designated planning area (ALUC 2008). Thus, the Proposed Project activities would not result in a safety hazard or excessive noise for people residing or working in the airport area. Implementation of the Proposed Project would not result in an impact associated with a public airport.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

f) The construction of the Proposed Project would not involve blocking or restricting any access routes after construction is complete. While the Proposed Project may introduce temporary traffic delays during construction with vehicles entering and exiting the site, these incidents are limited during the construction phase. The Proposed Project would comply with the City's General Plan Public Safety Policy 6.5 through 6.7 that requires implementing the City's Emergency Preparedness Program, establish designated evacuation routes throughout the City, maintain and update the Emergency Operations Plan and Fire Department Strategic Deployment Plan. (City of Orange 2010b). The Proposed Project would not interfere with emergency response plans or operations near the sites during

construction. As a part of the Project activities, emergency warning systems would be installed along Chapman Avenue and Water Street to ensure safe ingress and egress into the site for Fire Department vehicles. Further, after the completion of the Proposed Project, the presence of the fire station in the neighborhood would beneficially impact the emergency response and actions in and around the neighborhood. Less than significant impacts would occur.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

g) The City of Orange is primarily built-out with the potential danger of wildfires only located on the eastern portions of the City. The Project site not located within a very high fire hazard severity zone (CalFire 2007, 2011). The Proposed Project site is located in an urbanized area in the southwestern part of the City of Orange. Additionally, the Proposed Project site contains limited vegetation; and all construction and operation activities would be conducted in compliance with standard safety protocols, which would minimize potential release of flammable materials (including fuel, lubricant, paint, and solvents). Further, after the completion of the Proposed Project, Fire Station No. 1 would assist in efforts to mitigate risk of loss, injury, or death in the event of a wildfire in the City. No impacts are expected.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

10. HYDROLOGY AND WATER QUALITY

Would the Project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
(b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
(c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
	(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding in- or off-site;	☐	☐	☒	☐
	(iii) 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; or	☐	☐	☒	☐
	(iv) impede or redirect flood flows?	☐	☐	☒	☐
(d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	☐	☐	☐	☒
(e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐
(f)	Potentially impact stormwater runoff from construction activities?	☐	☐	☒	☐
(g)	Potentially impact stormwater runoff from post-construction activities?	☐	☐	☒	☐
(h)	Result in a potential for discharge of stormwater pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?	☐	☐	☒	☐
(i)	Result in the potential for discharge of stormwater to affect the beneficial uses of the receiving waters?	☐	☐	☒	☐
(j)	Create the potential for significant changes in the flow velocity or volume of stormwater runoff to cause environmental harm?	☐	☐	☒	☐
(k)	Create significant increases in erosion of the Project site or surrounding areas?	☐	☐	☒	☐

The following analysis is based on the Preliminary Priority Water Quality Management Plan (WQMP) prepared by MSL Engineering, dated June 22, 2020 (Appendix C).

Impact Analysis:

a) The Proposed Project includes the construction of a new Fire Station No. 1, Fire Headquarters, and associated parking lot to replace the current aging and undersized station. The Project site is currently vacant, graded with little to no vegetation. The site of the parking lot is located at a property that includes an existing parking lot, across Water Street from main Project site. The Proposed Project design, including a reconfiguration of the parking lot and addition of landscaping, would result in a 74,021 square feet of impervious surfaces and approximately 13,144 square feet of landscaping (MSL Eng. 2020).

As previously discussed in Response 7(b), the Proposed Project would, as a part of the NPDES permit, include the development of a Stormwater Pollution Prevention Plan (SWPPP) to address and control possible stormwater pollution impacts during construction. The implementation of a SWPPP is required for projects disturbing more than one acre of developed land. The SWPPP identifies and requires the implementation of best management practices (BPMs) to control soil erosion and sediment runoff.

Post-construction, the Proposed Project operations might result in the generation of the following expected pollutants: suspended-solid/sediments, nutrients, heavy metals, pathogens (bacteria/virus), pesticides, oil and grease, toxic organic compounds, and trash and debris. However, due to the implementation of best management practices (BMPs), including minimizing impervious areas and maximizing permeability onsite, the impacts from any discharge or runoff would be minimized. These BMPs would include, but not be limited to, connecting all impervious areas to the proposed infiltration system and maximizing permeability, developing a Spill Contingency Plan, designating spaces for vehicle or community wash areas and fueling areas (MSL Eng. 2020).

To help prevent long-term water quality impacts associated with land use changes and in accordance with the requirements of the City and consistency with the regional Municipal Separate Storm Sewer System (MS4) storm water permit issued by the Santa Ana Regional Water Quality Control Board (RWQCB) (Order No. R8-2009-0030, amended by Order No. R8-2010-0062; NPDES Permit No. CAS618030), new development and significant redevelopment projects must prepare and implement a project-specific Water Quality Management Plan (WQMP) aimed at reducing pollutants in post-development runoff. Specifically, a project-specific WQMP includes RWQCB approved BMPs, where applicable, that address post-construction management of storm water runoff water quality. As part of the WQMP, projects must incorporate low impact development (LID), site design and source control BMPs to address post-construction storm water runoff management. In addition, new development and redevelopment projects are required to implement site design/LID and source control BMPs applicable to their specific priority project categories, as well as implement treatment control BMPs where necessary. Selection of LID and additional treatment control BMPs is based on the pollutants of concern for the specific project site and the BMP's ability to effectively treat those pollutants, in consideration of site conditions and constraints.

Thus, with the compliance to regulatory requirements and the BMPs established for the Project in a final WQMP, Project construction and operation would not result in a violation of any water quality standard, Therefore, Project impacts related to water quality would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

b) The City currently relies on approximately 20,623 acre-feet per year of groundwater from the Orange County Basin (OC Basin) to meet a large portion of its water demand. Recharging water into the OC Basin through natural and artificial means is essential to support pumping from the OC Basin (City of Orange 2015). However, a review of the Surface Water Recharge Facilities Map prepared by the Orange County Water District shows that the Proposed Project site is not used for groundwater recharge (OCWD 2018). The Proposed Project activities do not involve ground excavation or drilling that would impact the City's wells or the groundwater quality. The Proposed Project would connect to the existing water lines and would not result in a significant decrease in groundwater supplies nor would it exceed the planned groundwater usage. The Proposed Project would comply with applicable

Stormwater Pollution Prevention Plan (SWPPP) procedures and BMPs to restrict the discharge of contaminated runoff into local storm drains. Along with site planning features focused on minimizing impervious areas and increasing permeability onsite, the Proposed Project would include BMPs after project completion to avoid and minimize any polluted runoff from the site as outlined in the WQMP. As a result, impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

c) i) The Proposed Project would be constructed on a currently vacant parcel in an urban setting and would not impact any nearby streams or rivers. The nearest waterway to the Project site is Santiago Creek, which is approximately 0.67 miles to the west of the site. As discussed in Response 10(a), the Proposed Project would minimize impervious areas and maximizing permeability onsite and all generated runoff from the site will be collected onsite and conveyed through new drain box inlets, that contain Kristar Fossil Filter inserts for initial pre-treatment, to the new stormwater treatment system. The Final WQMP would include other BMPs to address operational concerns of soil erosion, including but not limiting to, developing a Spill Contingency Plan and designating spaces for vehicle or community wash areas and fueling areas. Additionally, the Project would also implement a SWPPP to address the concerns of polluted runoff during construction. Thus, impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

ii) As discussed in Response 10(a), the Proposed Project could result in polluted runoff due to construction activities. However, the proposed construction activities would be limited to the Proposed Project site and the Proposed Project does not involve the disturbance or alteration of a stream, river, or water body. Further, as noted in Response 10(c)(i), the Proposed Project would implement a SWPPP and a WQMP to address any concerns related to soil erosion and polluted runoff onsite during construction and operation respectively. The SWPPP addresses construction concerns, whereas the WQMP addresses operational concerns. Impacts would then be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

iii) and iv) A geotechnical investigation of the site revealed that the site is not located within a 100-year or 500-year flood plain based on the Federal Emergency Management Agency (FEMA) flood maps, nor is located near dams or in an area shown as susceptible to dam inundation by the California Office of Emergency Services (OES) (Leighton 2019). As previously discussed in Responses 10(c)(i) and (ii), the Proposed Project would result in increased runoff due to the construction and operational activities, especially with the addition of impervious surfaces to the site. However, no activities are proposed that would alter the existing topography of the Project site, which is mostly flat, that would impede or redirect flood flows. Further, the implementation of the BMPs delineated in the SWPPP and WQMP, would ensure that the generated runoff from construction and operational activities respectively would be minimized and mitigated wherever possible. Thus, it is expected that the

Proposed Project would not result in runoff that would exceed the existing or planned capacities of stormwater drainage systems. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

d) The Project site is located approximately 12 miles from the Pacific coast. Seiches are large waves generated by ground shaking effects within enclosed bodies of water. Tsunamis are tidal waves generated by fault displacement or major ground movement. The Proposed Project sites are relatively flat, located in an urban setting and not located in any flood hazard, tsunami, or seiche zones. No impacts would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

e) As discussed in Responses 10(a) and 10(b), the Proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management. The Proposed Project would not conflict or obstruct the OCWD's Groundwater Management Plan because the Proposed Project would not involve the modification of any water systems or wells within the area. Thus, impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

f) As noted in Response 10(a), the Proposed Project would involve potentially hazardous materials during construction work, which when mixed with discharge or stormwater runoff onsite, could result in adverse impacts and polluted stormwater runoff. However, the Proposed Project would include BMPs and the development of a SWPPP to address these issues and minimize stormwater pollution during construction. Thus, the impacts will be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

g) and h) Post-construction, the Fire Headquarters and the Fire Station No. 1 operations might result in the generation of the following expected pollutants: suspended-solid/sediments, nutrients, heavy metals, pathogens (bacteria/virus), pesticides, oil and grease, toxic organic compounds, and trash and debris. However, as discussed in Response 10(a), all generated runoff from the site would be collected onsite and conveyed through new drain box inlets, that contain Kristar Fossil Filter inserts for initial pre-treatment, to the new stormwater treatment system. Further, the implementation of the BMPs delineated in the SWPPP and WQMP, would ensure that the generated runoff from construction and operational activities respectively would be minimized and mitigated wherever possible. These BMPs would include, but not be limited to, connecting all impervious areas to the proposed infiltration system and maximizing permeability, developing a Spill Contingency Plan, designating spaces for vehicle or community wash areas and fueling areas and conducting employee-training programs

related to the BMP practices. Thus, impacts to stormwater runoff during post-construction activities and during the regular operation of the fire station is less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

i) As noted in Response 10(a), the Project design proposes that all generated runoff from the site would be collected onsite and conveyed through new drain box inlets, that contain Kristar Fossil Filter inserts for initial pre-treatment, to the new stormwater treatment system. A water well is located at the property adjacent to the main Project site, in the Water Yard. The Project would also implement a SWPPP and a WQMP to ensure that any polluted stormwater runoff, generated during construction and operation respectively, will not impact the receiving public water system. The SWPPP addresses construction concerns, whereas the WQMP addresses operational concerns. These BMPs would include, but not be limited to, connecting all impervious areas to the proposed infiltration system and maximizing permeability, developing a Spill Contingency Plan, designating spaces for vehicle or community wash areas and fueling areas (MSL Eng., 2020). The Proposed Project would convey runoff to an underground infiltration system located on the southwest portion of the main Project site through a new storm drain to the west side of Water Street. The infiltration system will consist of 70 linear feet of 8 inch diameter perforated corrugated steel pipe surrounded by 1 foot of drainage gravel. The infiltration system is proposed approximately 100 feet west of the existing water well on the Water Yard. The onsite stormwater runoff is proposed to be collected within new drain box inlets that contain Kristar Fossil Filter inserts for initial pretreatment and to collect large debris that will occur within the parking lot. Since a filter will be included in the proposed infiltration system, the proximity to the existing well would not cause a significant impact (MSL Engineering 2020). Thus, impacts will be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

j) The Proposed Project would generate stormwater runoff during construction and operation of the Fire Station, Headquarters, and the associated facilities. However, the implementation of the BMPs delineated in the SWPPP and WQMP, would ensure that the generated stormwater runoff from construction and operational activities respectively would be minimized and mitigated wherever possible. All runoff from the site will be collected onsite and conveyed through a new underground storm drain system to the new storm water treatment system. The main Project site would be collected and treated separately from the parking Project site. The impervious surface area would be reduced from 82,806 sf in the existing condition to 74,021 in the proposed condition. With the other drainage characteristics remaining relatively consistent in the proposed conditions when compared to the existing condition, this would lead to a reduction in peak flowrates from the site in the proposed condition. The BMPs for the site would include, but not be limited to, connecting all impervious areas to the proposed infiltration system and maximizing permeability, developing a Spill Contingency Plan, designating spaces for vehicle or community wash areas and fueling areas thus minimizing the amount of storm water runoff generated onsite. The two separate underground storm water infiltration systems would treat runoff from the 24hour, 85th Percentile Rainfall depth, determined to be 0.8 inches for the site location (MSL Eng. 2020). Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

k) The Proposed Project activities, during construction, involves ground disturbance and excavation which could generate loose soil. This, along with stormwater and discharges from construction activities, could result in soil erosion onsite. However, as noted in Response 10(c)(i), a SWPPP will be developed for the site to minimize runoff and soil erosion, and properly treat any polluted runoff that is generated during construction. Thereafter, in accordance with the required final WQMP, BMPs would be employed on the site including, but not limiting to, developing a Spill Contingency Plan and designating spaces for vehicle or community wash areas and fueling areas, which would avoid and minimize any polluted runoff from the site during operations. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

11. LAND USE/PLANNING

Would the Project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Physically divide an established community?	☐	☐	☐	☒
(b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Impact Analysis:

a) The Proposed Project includes the construction of the City of Orange Fire Station No. 1, Fire Headquarters, and associated parking lot to replace the current aging and undersized station. The main Project site is located on a City owned and currently vacant lot, adjacent to the Orange Water Division building and other professional office facilities and residential buildings. The parking site is located on the site of an existing operational parking lot across Water Street. The Proposed Project would be consistent with the existing Public Facilities and Institutions (PFI) land use south of the site, as the main Project site is adjacent to the existing Water Division building; and would not divide an established community. The parking lot use would remain with landscape and perimeter screening enhancements. While the southern boundary of Proposed Project site is in close proximity to residential properties, the Proposed Project activities would not prevent resident access to the nearby roadways, transit facilities, or any other public service and utility, either during constriction or operation of the facilities. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

b) The Proposed Project sites, as noted above, are surrounded by the Orange Water Division building, other professional office facilities and residential buildings. The main Project site is zoned Office Professional (O-P) and Single Family Residential (R-1-6), and the parking site is zoned as Single Family Residential (R-1-6) (City of Orange 2016). However, as part of the Project activities, a zone change of the main Project site to Public Institution (P-I) is proposed to better reflect the existing nature of the land uses in the neighborhood and to ensure that the Proposed Project is consistent with the General Plan. Therefore, with the zone change, the Proposed Project, would result in a more consistent and cohesive land use pattern in the neighborhood. The parking site will retain the same designation throughout the Proposed Project activities. Per City Zoning Code 17.38.050 – Exemption for Public Utilities and Publicly Owned Uses, since the site of the parking lot will not be expanding in size, it is not subject to nonconforming provisions. The Proposed Project would not conflict with any policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Less than significant impacts are expected.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

12. MINERAL RESOURCES

Would the Project:

		Potentially Significant Impact	Less than Significant 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?	☐	☐	☐	☒

Impact Analysis:

a) The Proposed Project site is not identified as being within a significant mineral resource zone in the California Department of Conservation's Mineral Land Classification Map. In addition, the map notes no other sites in the City of Orange as a State Division of Mines and Geology designated classified mineral resource deposit area (California Department of Conservation 2020). No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

b) The Proposed Project would be limited to a total area of approximately 2.75 acres in size and would not result in loss of availability of a known or locally important resource. As noted above, no other sites have been designated as a classified mineral resource deposit area in the City of Orange (California Department of Conservation 2020). In addition, no mineral resource extraction would occur as part of the Proposed Project. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

13. NOISE

Would the Project result in:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
(b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
(c)	For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

This section describes the existing noise setting and potential noise and vibration effects from the Proposed Project implementation on the site and its surrounding areas. The following analysis is based on the technical noise study prepared by Vista Environmental, dated June 23, 2020 (Appendix D).

Existing Setting

To determine the existing noise levels, noise measurements have been taken in the vicinity of the Proposed Project site. The field survey noted that noise within the Proposed Project area is generally characterized by vehicle traffic on Chapman Avenue, which is located adjacent to the north side of the main Project site. The noise monitoring locations were selected in order to obtain noise measurements of the current noise levels in the vicinity of the nearby homes. The noise measurement sites were selected to provide a representative sampling of the existing noise levels in the Proposed Project vicinity. The noise measurements were recorded between 12:18 p.m. on Wednesday, April 1, 2020 and 12:35 p.m. on Thursday, April 2, 2020. The descriptions of the noise monitoring sites and results of the noise level measurements are presented in Table 10 below.

Table 10: Existing (Ambient) Noise Level Measurements

Site No.	Site Description	Average (dBA L_{eq})		1-hr Average (dBA L_{eq}/Time)		Average (dBA CNEL)
		Daytime[1]	Nighttime[2]	Minimum	Maximum	
A	Located approximately 100 feet south of the southwest corner of the parking site, on a parking lot gate that is located approximately 90 feet north of Almond Ave Centerline.	54.8	47.0	38.5 12:58 a.m.	61.5 11:16 a.m.	56.3
B	Located approximately 160 feet north of the Main Project site on a tree that is located approximately 35 feet west of Monterey Road centerline.	64.2	53.2	46.6 10:56 p.m.	68.8 1:48 a.m.	64.0
C	Located approximately 50 feet east of the Main Project site on a sign in front of the home at 129 Jameson Street	56.8	47.2	40.1 1:13 a.m.	60.1 9:40 a.m.	60.1

Source: Vista Environmental 2020; Noise measurements taken between Wednesday April 1, and Thursday, April 2, 2020.
Notes:
[1] Daytime defined as 7:00 a.m. to 10:00 p.m. (Section 8.24.040 of the Municipal Code)
[2] Nighttime define as 10:0 p.m. to 7:00 a.m. (Section 8.24.040 of the Municipal Code)

Standard Noise Regulatory Conditions

The City of Orange General Plan and Municipal Code establishes the following applicable policies related to noise and vibration.

City of Orange General Plan

The City of Orange has developed its own land use compatibility standards based on recommended parameters from the California Governor's Office of Planning and Research that rate compatibility. Using the State's land use compatibility guidelines, the City has established interior and exterior noise standards. The City's compatibility standards provide only for normally acceptable conditions based on State recommendations and City land use designations. The City's Land Use Compatibility standards are presented in Table 11.

Table 11: City of Orange Maximum Allowable Noise Exposure – Transportation Sources

Land Use		CNEL (dBA)	
Land Use Designations	**Uses**	**Interior[1,3]**	**Exterior[2]**
Estate Low Density Residential Low Density Residential Low Medium Density Residential	Single-family, duplex, and multiple-family	45	65
	Mobile home park	N/A	65
Medium Density Residential Neighborhood Mixed-Use Neighborhood Office Professional Old Towne Mixed-use General Commercial Yorba Commercial Overlay Urban Mixed-use Urban Office Professional	Single-family	45	65
	Mobile home park	N/A	65
	Multiple-family, mixed use	45	65[4,5]
	Transient lodging-motels, hotels	45	65
	Sports arenas, outdoor spectator sports	N/A	N/A
	Auditoriums, concert halls, amphitheaters	45	N/A
	Office buildings, business, commercial and professional	50	N/A
Light Industrial Industrial	Manufacturing, utilities, agriculture	N/A	N/A
Public Facilities and Institutions	Schools, nursing homes, day care facilities, hospitals, convalescent facilities, dormitories	45	65
	Government Facilities-offices, fire stations, community buildings	45	N/A
	Places of Worship, Churches	45	N/A
	Libraries	45	N/A
	Utilities	N/A	N/A
	Cemeteries	N/A	N/A
Recreation Commercial Open Space Open Space-Park Open Space-Ridgeline Resource Area	Playgrounds, neighborhood parks	N/A	70
	Golf courses, riding stables, water recreation, cemeteries	N/A	N/A

Source: Vista Environmental 2020
Notes:

Land Use		CNEL (dBA)	
Land Use Designations	Uses	Interior[1,3]	Exterior[2]

(1) Interior habitable environment excludes bathrooms, closets, and corridors.
(2) Exterior noise level standard to be applied at outdoor activity areas, such as private yards, private patio, or balcony of a multi-family residence. Where the location of an outdoor activity area is unknown or not applicable, the noise standard shall be applied inside the property line of the receiving land use.
(3) Interior noise standards shall be satisfied with windows in the closed position. Mechanical ventilation shall be provided per Uniform Building Code (UBC) requirements.
(4) Within the Urban Mixed-Use, Neighborhood Mixed-Use, Old Towne Mixed-Use, and Medium Density Residential land use designations, exterior space standards apply only to common outdoor recreational areas.
(5) Within Urban Mixed-Use and Medium Density Residential land use designations, exterior noise levels on private patios or balconies located within 250 feet of freeways (I-5, SR-57, SR-55, SR-22, or SR-241) and Smart Streets and Principal Arterial identified in the Circulation & Mobility Element that exceed 70 dB should provide additional common open space.
N/A=Not Applicable to specified land use category or designation.

The City's maximum allowable noise exposure levels from stationary sources are defined in Table N-4 of the General Plan and reprinted below in Table 12.

Table 12: City of Orange Maximum Allowable Noise Exposure – Stationary Sources

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly Equivalent Level (Leq), dBA	55	45
Maximum Level (Lmax), dBA	70	65

Source: Vista Environmental 2020.
Notes:
(1) These standards apply to new or existing noise sensitive land uses affected by new or existing non-transportation noise sources, as determined at the outdoor activity area of the receiving land use. However, these noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).
(2) Each of the noise levels specified above should be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).
(3) No standards have been included for interior noise levels. Standards construction practices that comply with exterior noise levels identified in this table generally result in acceptable interior noise levels.
(4) The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels. If the existing ambient noise level exceeds the standards listed in Table N-4, then the noise level standards shall be increased at 3 dB increments to encompass the ambient noise environment. Noise level standards incorporating adjustments for existing ambient noise levels shall not exceed a maximum of 70 dB Leq.

For City analysis of noise impacts and determining appropriate mitigation under the California Environmental Quality Act (CEQA), in addition to the maximum allowable noise level standards outlined in Tables N-3 (Table 11 above) and N-4 (Table 12 above) from the General Plan, an increase in ambient noise levels is assumed to be a significant noise impact if a project causes ambient noise levels to exceed the following:

- Where the existing ambient noise level is less than 60 dBA, a project related permanent increase in ambient noise levels of 5 dBA CNEL or greater.
- Where the existing ambient noise level is greater than 65 dBA, a project related permanent increase in ambient noise levels of 3 dBA CNEL or greater.

In addition to the standards provided above, the City of Orange General Plan includes the following goals and policies that are applicable to the proposed project.

Goals and Policies

GOAL 2.0: Minimize vehicular traffic noise in residential areas and near noise-sensitive land uses.

Policy 2.2: Encourage coordinated site planning and traffic control measures that minimize traffic noise in noise-sensitive land use areas.

GOAL 7.0: Minimize construction, maintenance vehicle, and nuisance noise in residential areas and near noise-sensitive land uses.

Policy 7.2: Require developers and contractors to employ noise minimizing techniques during construction and maintenance operations.

Policy 7.3: Limit the hours of construction and maintenance operations located adjacent to noise-sensitive land uses.

Policy 7.4: Encourage limitations on the hours of operations and deliveries for commercial, mixed-use, and industrial uses abutting residential zones.

City of Orange Municipal Code

The City of Orange Municipal Code establishes the following applicable standards related to noise.

Section 8.24.020 Definitions.

The following words, phrases and terms as used in this chapter shall have the meaning as indicated below:

A. "Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise at the location and approximate time at which a comparison with the alleged offensive noise is to be made.
B. "Adjusted ambient noise level" means the measured ambient noise level plus 3 dB (A). Three (3) dB (A) is the industry-accepted threshold of human perceptibility for a change in noise environment.

Section 8.24.040 Exterior Noise Standards.

A. The following noise standards [Table 13] for fixed noise sources, unless otherwise specifically indicated, shall apply to all residential property:

Table 13: City of Orange Municipal Code Exterior Noise Standards

Standard	Noise Level	Time Period
Hourly Average (L_{eq})	55 dB (A)	7:00 a.m. – 10:00 p.m.
	50 dB (A)	10:00 p.m. – 7:00 a.m.
Maximum Level	70 dB (A)	7:00 a.m. – 10:00 p.m.
	65 dB (A)	10:00 p.m. – 7:00 a.m.

Source: Vista Environmental, 2020.

B. It is unlawful for any person at any location within the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other residential property to exceed the noise standards identified in Table 8.24.040. For multi-family residential or mixed use developments located within the City's Urban Mixed Use, Neighborhood Mixed Use, Old Towne Mixed Use or Medium Density Residential General Plan land use districts, exterior noise standards shall apply to common recreation areas only and shall not apply to private exterior space (such as a private yard, patio, or balcony)
C. In the event the ambient noise level exceeds the noise standards identified in Table 8.24.040 of this section, the "adjusted ambient noise level" shall be applied as the noise standard. In cases where the noise standard is adjusted due to a high ambient noise level, the noise standard shall not exceed the "adjusted ambient noise level", or 70 dB (A), whichever is less. In cases where the ambient noise level is already greater than 70 dB (A), the ambient noise level shall be applied as the noise standard.
D. Each of the noise limits specified in Table 8.240.040 shall be reduced by five dB(A) for impact or simple tone noises, recurring impulsive noises, or for noises consisting of speech or music. (Ord. No. 1-4 § I, 8-12-14)

8.24.050 Exemptions from Chapter Provisions.

The following activities shall be exempted from the provisions of this chapter:

- Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities take place between the hours of 7:00 a.m. and 8:00 p.m. on any day except for Sunday or a Federal holiday, or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday or a Federal holiday. Noise generated outside of the hours specified are subject to the noise standards identified in Table 8.24.040;
- Noise sources associated with the maintenance of real property, provided such activities take place between the hours of 7:00 A.M. and 8:00 P.M. on any day except Sunday or a Federal holiday, or between the hours of 9:00 A.M. and 8:00 P.M. on Sunday or a Federal holiday;
- Mobile noise sources including but not limited to operational noise from trains, or automobiles or trucks traveling on roadways. Transportation noise as related to noise/land use compatibility is subject to the City's General Plan Noise Element;
- Any activity to the extent regulation thereof has been preempted by State or Federal Law. (Ord. No. 1-4 § I, 8-12-14)

8.24.060 Special Provisions for Schools, Hospitals and Churches.

It is unlawful for any person to create any noise which causes the noise level at any school, hospital, or church, while the same is in use, to exceed the noise limits as specified in Section 8.24.040, or which noise level unreasonably interferes with the use of such institutions. (Ord. No. 1-4 § I, 8-12-14)

Project Design Features

The analysis in this section was based on implementation of the following project design features for the Project, as noted in the Project Description section.

Project Design Feature 1:
The Project applicant shall construct a minimum 7.7-foot concrete masonry unit wall that is depicted on the proposed site plan and is located on the east side of the proposed staff parking lot that is located on the southeast corner of the Fire Station Site. Any doors installed in the wall shall be solid doors with self-closing hinges.

Project Design Feature 2:
The Project applicant shall install a sound enclosure on the proposed emergency generator that is depicted on the proposed site plan. The sound enclosure shall be no less effective than a Level 1 Sound Enclosure provided by Generac.

Impact Analysis:

a) The Proposed Project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the City of Orange General Plan or noise ordinance, or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the Proposed Project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the Proposed Project are anticipated to include demolition and grading of both Project sites, building construction, paving of the onsite driveways, and parking lots, and application of architectural coatings. Noise impacts from construction activities associated with the Proposed Project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the main Project site are single-family residences located on the east side of Jameson Street, which are as near as 60 feet east of the main Project site. The nearest sensitive receptors to the parking site are single-family residences located as near as 30 feet southwest of the parking site.

Section 8.24.050(E) of the Municipal Code exempts construction noise from the City noise standards that occurs between 7:00 a.m. and 8:00 p.m. Monday through Saturday and between 9:00 a.m. and 8:00 p.m. on Sundays and holidays. However, the City construction noise standards do not provide any limits to the noise levels that may be created from construction activities and even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase to the nearby residents and offsite workers.

In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the Federal Transit Administration (FTA) construction noise criteria thresholds detailed in Section 4.1 in Appendix D have been utilized, which shows that a significant construction noise impact would occur if construction noise exceeds 90 dBA Leq at any of the nearby sensitive receptors. The calculated construction noise results are shown below in Table 14 and the RCNM printouts are provided in Appendix D.

Table 14: Construction Noise Levels at the Nearest Homes

Construction Phase	Construction Noise Level (dBA Leq) at:	
	Nearest Homes to Main Project site[1]	Nearest Homes to Parking Site[2]
Demolition	82	82
Grading	81	81
Building Construction	76	61
Paving	74	73
Painting	71	71
FTA Construction Noise Threshold[3]	**90**	**90**
Exceed Threshold?	No	No

Source: Vista Environmental 2020

[1] The nearest homes to the Main Project site are located on the east side of Jameson Street and are as near as 60 feet east of the Main Project site.

[2] The nearest homes to the Parking site are located as near as 30 feet southwest from the southwest corner of the Parking site. 5 dB of shielding was added to account for the existing 6 foot high wall located on the home's property line.

[3] FTA Construction Noise Threshold obtained from Appendix D.

Table 14 shows that the greatest noise impacts would occur during the demolition phase of construction, with a noise level as high as 82 dBA Leq at the nearest homes to the main Project site and nearest homes to the parking site. Table 14 also shows that none of the construction phases would exceed the FTA construction noise standard of 90 dBA for residential uses. Therefore, through adherence to allowable construction times provided in 8.24.050(E) of the Municipal Code, the construction activities for the Proposed Project would not create a substantial temporary increase in ambient noise levels that are in excess of applicable noise standards. Impacts would be less than significant.

Operational-Related Noise

The Proposed Project would consist of the relocation of Fire Station No. 1 and Headquarters. Potential noise impacts associated with the operations of the Proposed Project would be from project-generated vehicular traffic on the nearby roadways as well as from onsite noise sources associated with the operation of the Proposed Project.

Roadway Vehicular Noise

Vehicle noise is a combination of the noise produced by the engine exhaust, and tires. According to the General Plan, an increase in ambient noise levels is assumed to be a significant noise impact if a Project causes ambient noise levels to exceed the following:

- Where the existing ambient noise level is less than 60 dBA, a Project related permanent increase in ambient noise levels of 5 dBA CNEL or greater.
- Where the existing ambient noise level is greater than 65 dBA, a Project related permanent increase in ambient noise levels of 3 dBA CNEL or greater.

Since the Proposed Project consists of the relocation of the Fire Station No. 1 and Headquarters from 176 S. Grand Street to the proposed location, which is approximately 0.6 mile away, no traffic analysis was prepared for the Project, since the Project generated vehicle trips would occur on the same roads for both without and with Project conditions. However, the Proposed Project has the potential to increase traffic on Chapman Avenue in the immediate vicinity of the Project site. According to the Program Environmental Impact Report for the City of Orange General Plan, in the year 2030, Chapman Avenue between Cambridge Street and Tustin Street will have 28,400 vehicles per day. According to the CalEEMod model run in the Air Quality Analysis (Appendix A), the Proposed Project would generate up to 1,932 daily trips, which would result in up to a 6.8 percent increase of daily trips on Chapman Avenue in the vicinity of the Project site.

In order for Project-generated vehicular traffic to increase the noise level on Chapman Avenue by 3 dB, the roadway traffic would have to double, and for the roadway noise levels to increase by 1.5 dB, the roadway traffic would have to increase by 50 percent. Since the Proposed Project would only result in a maximum of a 6.8 percent increase in traffic volumes on Chapman Avenue, the Project-related roadway noise increase is anticipated to be negligible. It should also be noted that a large percentage of trips generated from the existing Fire Station No. 1 and Headquarters currently travel on Chapman Avenue in the vicinity of the Project site, so the actual Project trip generation would be much less than 6.8 percent of the traffic on Chapman Avenue. Roadway noise impacts created from the Proposed Project would be less than significant.

Onsite Noise Impacts

The operation of the proposed Fire Station No. 1 and Headquarters may create an increase in noise levels created onsite from fire station activities, rooftop mechanical equipment, and the backup generator at the nearby homes located as near as 60 feet east of the main Project site. The parking site would consist of long-term employee parking behind a security gate, with only two visitor parking spaces. The parking site activity would create noise levels that would be well below City noise standards.

Section 8.24.040(A) of the City's Municipal Code limits noise generated from onsite activities at the nearby residential properties to 55 dBA Leq and 70 dBA Lmax between the hours of 7:00 a.m. and 10:00 p.m. and 50 dBA Leq and 65 dBA Lmax between the hours of 10:00 p.m. and 7:00 a.m.

In order to determine the noise that would be created with implementation of the Proposed Project, a 24-hour noise measurement was taken in the yard at the existing Fire Station No. 1 that captured all fire station-related noise sources, including if sirens were on when vehicles left the station. In addition, a reference noise measurement of operational rooftop mechanical equipment and the manufacturer noise specifications for a 250 kW backup generator have been utilized to provide a complete assessment of the potential operational noise that would be created by the Project. The reference noise measurements are shown in Table 15. Table 15 also shows the anticipated noise level from each source at the nearest residences located on the east side of the main Project site. The operational reference noise measurements and the noise reduction calculations provided by the proposed 7.7 foot high sound wall on the east side of the staff parking area that is detailed in Project Design Feature 1, a 4 foot high parapet wall that would shield the rooftop equipment, and use of a sound enclosure on the backup generator that is detailed in Project Design Feature 2 are shown in Appendix D.

Table 15: Operational Noise Levels at the Nearest Homes to the Main Project site

Noise Source	Reference Noise		Calculated Noise Levels		City Noise Standards (Day/Night)	Exceed Standard? (Day/Night)
	Distance Receptor to Source (feet)	Reference Noise Level (dBA)	Distance to Homes (feet)	Noise Level[1] (dBA Leq)		
Fire Station Activities (including siren use)	30	55.7 Leq	150	34 Leq	55/50	No/No
		67.9 Lmax		65 Lmax	70/65	No/No
Rooftop Equipment	10	66.6 Leq	70	31 Leq	55/50	No/No
		79.2 Lmax		43 Lmax	70/65	No/No
Backup Generator	23	76.0 Leq	200	50 Leq	55/50	No/No
		76.0 Lmax		50 Lmax	70/65	No/No

Notes:

[1] The calculated noise levels account for the noise reduction provided by Project Design Feature 1 of the proposed 7.7-foot high wall on the east side of staff parking area and the proposed 4-foot parapet wall on the roof for the Rooftop Equipment and Project Design Feature 2 that requires a sound enclosure for the backup generator (see Appendix D).

Table 15 shows that with implementation of Project Design Features 1 and 2 that the onsite operational noise levels created by the proposed Fire Station No. 1 and Headquarters would be within the City's daytime and nighttime average and maximum noise standards at the adjacent residences as near as 60 feet from the Project site, adjoining Jameson Street on the east side of the main Project site. Therefore, the Proposed Project would not result in a substantial permanent increase in ambient noise levels from onsite noise sources. Impacts would be less than significant.

Emergency Vehicle Siren Noise on Nearby Roads

The onsite noise analysis, provided above, analyzed the noise impacts from all anticipated onsite noise impacts, including emergency vehicle siren noise. However, there is potential that the proposed relocation of Fire Station No. 1 and Headquarters would result in increased emergency vehicle siren use on the nearby roads. According to the Orange Fire Department, Fire Station No. 1 received 16,483 calls in 2019, which equates to an average of 45 calls per day. It should be noted that a majority of calls do not require sirens (typically less than 23 calls per day use sirens). Approximately a quarter of the calls from the existing Fire Station No. 1 travel along Chapman Avenue in the vicinity of the Project site (approximately 6 calls per day currently travel on Chapman Avenue from Fire Station No. 1), so the proposed relocation of Fire Station No. 1 would likely result in an increase of siren use in the vicinity of the Project site by an average of approximately 17 calls per day (i.e., 45/2 = 23-6=17).

Section 8.24.050(D) of the Municipal Code exempts noise created from emergency vehicles and Section 8.24.050(L) of the Municipal Code exempts noise created from vehicles operating on public roadways. As such, emergency vehicle siren use is exempt from the Municipal Code noise standards. However, page N-9 of the General Plan details that an increase in ambient noise levels is assumed to be a significant noise impact if a project causes ambient noise levels to exceed the following:

- Where the existing ambient noise level is less than 60 dBA, a project related permanent increase in ambient noise levels of 5 dBA CNEL or greater.
- Where the existing ambient noise level is greater than 65 dBA, a project related permanent increase in ambient noise levels of 3 dBA CNEL or greater.

It is anticipated that the home at that would experience the greatest impact from increased siren use is located at 120 N Monterey Road, which is located as near as 175 feet north of the proposed Fire Station exit driveway on Chapman Avenue. This home/sensitive receptor is the closest distance to Chapman Avenue and is also located nearest to the proposed fire station driveway. Hence this site was selected for analysis as the nearest capture point for siren noise from emergency vehicles traveling both east and west on Chapman Avenue. Noise Measurement Site B that is shown above in Table 10, was taken near the south property line at 120 N Monterey Road, and measured a noise level of 64.0 dBA CNEL.

Most emergency vehicle sirens are rated around 124 dB at 10 feet from the siren (https://www.fireapparatusmagazine.com/2017/04/04/siren-limitation-training/#gref). Based on standard geometric spreading of noise, at 175 feet, the siren noise would be 99 dB. The nearest residence is located behind a row of commercial buildings and Caltrans research (Caltrans 2013) has found that a row of buildings provide approximately 5 dB of attenuation. As such, this would lower the siren noise to 94 dB at the nearest home.

It is assumed that the peak siren noise level would last approximately 10 seconds at the nearest home to the proposed Fire Station driveway. Based on the average increase of 17 calls with sirens per day, this would result in a 2.8 minute increase in siren noise per day at the nearest home, which represents 1/508 of the day (24 hour period). The increased siren use would result in a 4.7 dB noise level increase at the nearest residence to the proposed Fire Station No. 1 driveway, which is within the 5 dB increase threshold detailed above. It should be noted, that due to the local nature of the proposed fire station calls, the number of new trips and associated siren use would drop-off quickly as one moves away from the Project site, and therefore other residences in the vicinity of the Project site would experience much lower siren noise impacts than the nearest home to the proposed Fire Station No. 1 driveway. Therefore, emergency vehicle siren noise impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

b) The Proposed Project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the Proposed Project.

Construction-Related Vibration Impacts

The construction activities for the Proposed Project are anticipated to include demolition and grading of both Project sites, building construction, paving of the onsite driveways, and parking lots, and application of architectural coatings. Vibration impacts from construction activities associated with the Proposed Project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptors to the main Project site are single-family residences located on the east side of Jameson Street, which are as near as 60 feet east of the main Project site. The nearest sensitive receptors to the parking site are single-family residences located as near as 30 feet southwest of the parking site.

Section 5.10.3 of the City of Orange General Plan Program EIR (General Plan EIR), determined that a significant vibration impact would occur if vibration levels would exceed 0.2 inch per second PPV at any nearby building.

The primary source of vibration during construction would be from the operation of a bulldozer. A large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet. Based on typical propagation rates, the vibration level at the nearest offsite residential structure (30 feet away) would be 0.073 inch per second PPV. The vibration level at the nearest offsite structure would be below the 0.2 inch per second PPV threshold. Impacts would be less than significant.

Operations-Related Vibration Impacts

The Proposed Project would consist of the relocation of Fire Station No. 1 and Headquarters. The Proposed Project would result in the operation of fire trucks on the main Project site, which are a known source of vibration. The nearest receptors to the main Project site are single-family residences located on the east side of Jameson Street, which are as near as 150 feet east of where fire trucks would operate on the main Project site.

Caltrans has done extensive research on vibration level created along freeways and State Routes and their vibration measurements of roads have never exceeded 0.08 inches per second PPV at 15 feet from the center of the nearest lane, with the worst combinations of heavy trucks. Fire truck activities would occur onsite as near as 150 feet from the nearest offsite receptor. Based on typical propagation rates, the vibration level at the nearest offsite receptor would by 0.006 inch per second PPV. Therefore, vibration created from operation of the Proposed Project would be within the 0.2 inch per second PPV threshold of detailed. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

c) The Proposed Project would not expose people residing or working in the Project area to excessive noise levels from aircraft. The nearest airport is Fullerton Municipal Airport that is located approximately five miles northwest of the Project site. The Project site is located outside of the 60 dBA CNEL noise contours of Fullerton Municipal Airport. John Wayne Airport is located approximately seven miles southwest of the Project site. The Project site is located outside the 60 dBA CNEL noise contours of John Wayne Airport. No impacts would occur from aircraft noise.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

14. POPULATION AND HOUSING

Would the Project:

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

Impact Analysis:

a) The Proposed Project does not provide permanent housing or include operations that could result in unplanned growth such as extension or roadways or expansion of existing infrastructure. Although the fire station would include dormitory facilities, these are temporary facilities to account for the nature of fire-fighting operations and the need to provide living facilities. The Proposed Project would not induce population growth as the Project would be a new facility that is intended to replace the already operational fire station and headquarters for the City of Orange. No impacts would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

b) The Proposed Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The main Project site is currently vacant, and the site of the parking lot is located at the site of an existing parking area, across the street from the main Project site. Thus, tenants and residents within the vicinity of the site would not be displaced as part of the construction and operation of the Proposed Project. No impacts are anticipated.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

15. PUBLIC SERVICES

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Would the Project result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	i) Fire Protection?	☐	☐	☐	☒
	ii) Police Protection?	☐	☐	☐	☒
	iii) Schools?	☐	☐	☐	☒
	iv) Parks?	☐	☐	☐	☒
	v) Other public facilities?	☐	☐	☐	☒

Impact Analysis:

(a) i) The Proposed Project includes the construction of Fire Station 1, Fire Headquarters, and associated parking lot. Implementation of the Project would not involve the expansion of service as it would not induce any additional permanent population growth. In addition, the new facility of the City of Orange Fire Department Station is approximately 0.5 miles from the current facility and, thus, is intended to serve the same service area of the City of Orange Historical District, Chapman University, and stretches of the 55 and 22 Freeways. The Proposed Project would not increase the demand for fire protection or require new facilities; it is projected to improve the response times for the neighborhoods on the eastern end of the service area by one minute. No impacts are expected.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

ii) The Proposed Project accounts for an increased area for the new facilities housing the Fire Station 1, Fire Headquarters and the associated parking lot but does not involve the expansion of service. The Proposed Project site is less than two miles away, from the Orange Police Department on Batavia Street (Google Map 2020). The Proposed Project would not induce growth requiring the extension of existing services or creation of new services; there would not be any increase in the demand for police protection or requirement of new facilities. The area is currently being serviced by the Orange Police Department and would continue to receive the same services as nearby businesses. No impacts would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

iii) As noted above in Responses 15(a)(i) and (ii), the Proposed Project includes the construction of a new fire station, headquarters and parking lot for the Orange City Fire Department to replace the existing facility but does not involve the expansion of services. The Project site is approximately 1,000 feet away from Palmyra Elementary School. The Proposed Project would not induce growth requiring

the extension of existing educational services or creation of new services. The Proposed Project would not increase the demand for schools in the City. No impacts would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

iv) The Proposed Project includes the construction of new facilities for the Fire Department but would not induce growth requiring the extension of existing or creation of new park services. The Proposed Project would not increase the demand for parks**.** No impacts are expected.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

v) The Proposed Project would not induce growth requiring the extension of existing or creation of new services. While the Fire Department would have a new fire station and headquarters building replacing its current facilities, it would not induce expansion or addition of new service areas. The Proposed Project would not increase the demand for other public facilities**.** No impacts would occur.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

16. RECREATION

		Potentially Significant Impact	Less than Significant 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?	☐	☐	☐	☒

Impact Analysis:

a) The Proposed Project does not include features that would contribute to the increase use of existing neighborhood, regional parks or other recreational facilities or would cause substantial deterioration of the facility. The Proposed Project would not induce population growth as it would provide an upgraded and larger workplace for an existing workforce. No impacts are expected.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

b) The Proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The Proposed Project does not involve the addition of a substantial number of new jobs that may result in increased population and increased demands on recreational resources. No impacts are anticipated.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

17. TRANSPORTATION

Would the Project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
(b)	Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
(c)	Substantially increase hazards due to a geometric design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
(d)	Result in inadequate emergency access?	☐	☐	☒	☐

Impact Analysis:

a) The Circulation & Mobility Element of the City of Orange General Plan prioritizes the issues and opportunities that exist within the City's transit network, including improved rail and bus transit connections and frequency and implementation of a Bikeway Master Plan (City of Orange 2010d). The Proposed Project would not change any existing roadways, sidewalks or pedestrian paths or conflict with any such proposed plans and would occur within the boundaries of the two sites. There are no bicycle lanes or facilities in the immediate vicinity of the site. The Proposed Project would generate minor increases in traffic associated with short-term construction activities due to the presence and use of construction equipment and vehicles, such as loaders, pick-up trucks, backhoe, water truck, crane, asphalt paver and excavators. The construction equipment and vehicles are expected to be parked within the staging areas of the parking site or areas of the main Project site not currently under construction.

Further, the Proposed Project involves the construction of a replacement Fire Station No. 1 and Headquarters approximately 0.6 miles away from the existing facility; therefore, it is assumed that there will not be a significant increase in traffic after the completion of the Proposed Project that would exceed the current traffic capacity of the neighborhood streets. The proposed associated parking includes reconfiguration of the existing parking lot across Water Street, including demarcation of the parking spots, addition of secured entry/exit, stop signs and emergency warning systems and landscaping. However, all the Project activities would follow safety and design guidelines and would not result in any hazardous geometric design feature. Implementation of the Project would not result in an impact.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

b) *(In accordance with CEQA Guidelines Section 15064.3(c), the City of Orange, as the lead agency, will implement the provisions of Section 15064.3 of the CEQA Guidelines, when the provisions go into effect statewide beginning July 1, 2020.)*

The Proposed Project includes the construction of Fire Station 1, Fire Headquarters, and associated parking lot, which would provide the existing workforce with a new and upgraded facility. The

proposed associated parking will be located on the site of an existing parking lot across Water Street. The Proposed Project would not add a substantial amount of new jobs or cause an expansion of service.

The City of Orange, as the lead agency, will implement the provisions of Section 15064.3 of the CEQA Guidelines, vehicles miles traveled (VMT) thresholds for the purpose of analyzing a Project under Senate Bill (SB) 743, when the provisions go into effect statewide beginning July 1, 2020. Thus, currently, the Proposed Project is not analyzed with respect to VMT guidelines. However, the goal of SB 743 is to reduce VMT by increasing access to common goods. The Proposed Project would not have a significant impact on VMT, as Public Facilities are not considered to result in an increased level of VMT and can be screened out from requiring VMT analysis. Per the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA (2018), some project types have been identified as having the presumption of a less than significant impact. Community institution uses, such as fire stations, can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature.

Two transit stops are located on Chapman Avenue, on the northern boundary of the Project site which provide the workforce with alternative transportation to the Proposed Project. Additionally, Orange's Vision for the Future, as described in the General Plan, states that residential areas will be connected to commercial, recreational, and open space areas, as well as educational and cultural facilities via a balanced, multi-modal circulation network that accommodates vehicles, pedestrians, cyclists, hikers, and equestrians. This network will create additional opportunities for walking and biking, thus further reducing VMT all over the City (City of Orange 2010d). The Proposed Project would be consistent with any plan or program proposed to achieve this vision. A less than significant impact would occur.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

c) The Proposed Project would not change the design or location of the existing roadways and would not involve any incompatible uses. Stop signs and emergency warning systems would be installed along Chapman Avenue and Water Street to ensure safe egress from the site. The installation of the emergency warning systems would ensure that vehicles traveling on Chapman Avenue would be aware of any fire department vehicles exiting the site and would reduce hazards associated with the entrance of large vehicles exiting onto Chapman Avenue. When the emergency warning systems are alerted, vehicles traveling in both directions of Chapman Avenue would be indicated to stop to allow fire trucks or fire department vehicles to exit. The proposed associated parking includes reconfiguration of the existing parking lot across Water Street, including demarcation of the parking spots, addition of secured entry/exit, stop signs and emergency warning systems and landscaping. However, all the Project activities would follow safety and design guidelines and would not result in any hazardous geometric design feature. Implementation of the Project would not result in an impact.

Significance Determination: No Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: No Impact.

d) The Proposed Project intends to retain the existing circulation patterns (automobile, pedestrian, and bicycle) around the site. The Project facility would have the response driveway on Chapman Avenue, a gated staff and visitor entry and parking on Water Street. The parking site, located across Water Street,

would have a secured entrance on Water Street, facing the main Project site. Stop signs and emergency warning systems would be installed along Chapman Avenue and Water Street to ensure safe ingress and egress into the site. Additionally, the Project Civil Engineer, in consultation with Fire Department staff, has implemented industry-standard circulation standards for emergency response facilities into the site and surrounding circulation plan, including ingress/egress points, to ensure the Proposed Project complies with emergency access and safety requirements. The Proposed Project would not result in inadequate emergency access. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

18. TRIBAL CULTURAL RESOURCES

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:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	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).	☐	☒	☐	☐
(b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

Impact Analysis:

a) and b) Refer to Responses 5(a) and (b). The Proposed Project site is located on a mostly vacant property in an urbanized area with land uses consisting primarily of residential and commercial businesses surrounding it. The area is highly urbanized, and any proposed ground disturbing activities would not be expected to uncover native soils. However, due to the sensitive nature of the area, being in close proximity to Santiago Creek, the tribe considers there to be potential for tribal cultural resources onsite. Implementation of CUL-1 and TCR-1 would result in less than significant impacts.

As part of the Assembly Bill (AB) 52 consultation process required by State law, on April 1, 2020, the District sent tribal scoping letters electronically to the San Gabriel Band Of Mission Indians, Torres Martinez Desert Cahuilla Indians, Gabrielino/Tongva Nation, and the Gabrieleno Band of Mission Indians – Kizh Nation. The letter provided the location of the Proposed Project, the proposed development that will occur, and request to provide comments of the Proposed Project. A response was received from the Gabrieleno Band of Mission Indians – Kizh Nation on April 17, 2020 requesting a consultation with the Lead agency. The meeting took place on May 28, 2020 and as an outcome of the said meeting, the following mitigation measure was proposed to be implemented to allow monitors from the Gabrieleno Band of Mission Indians – Kizh Nation to be on-site to protect tribal cultural resources that may be encountered. As of June 22, 2020, the tribe has agreed to the mitigation measures proposed and consultation is considered complete.

TCR-1:

> Prior to the commencement of any ground disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleno Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill A52 (the "Tribe" or the "Consulting Tribe"). The monitor will have experience working with a qualified archaeologist, as defined in the Secretary of the Interior's Professional Qualifications Standards, and/or education or professional training in a related field, such as anthropology, archaeology or ethnology. A copy of the executed contract shall be submitted to the City of Orange Community Development Department prior to the issuance of any permit necessary to commence a ground-disturbing activity. The on-site monitoring shall commence when ground-disturbing activities begin and shall end when the project site ground-disturbing

activities are completed, or when the Native American Monitor has indicated that the site has a low potential for impacting Tribal Cultural Resources, whichever occurs first.

Ground disturbing activities are defined as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed.

All Tribal Cultural Resources unearthed by project activities shall be evaluated by the qualified archaeologist and Tribal monitor approved by the Consulting Tribe. If the resources are determined to be Native American in origin, the Consulting Tribe will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes. If human remains and/or grave goods are discovered or recognized at the Project Site, all ground disturbance shall immediately cease, and the county coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).

Work may continue on other parts of the Project Site while evaluation and, if necessary, mitigation takes place in accordance with CEQA Guidelines Section 15064.5(f). If the resource is determined by the qualified archaeologist and tribal monitor to be a non-Native American resource the applicant would be required to implement MM CUL-1.

Significance Determination: Potentially Significant Impact.
Mitigation Measures: CUL-1 and TCR-1.
Significance Determination After Mitigation: Less Than Significant Impact.

19. UTILITIES/SERVICE SYSTEMS

Would the Project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
(b)	Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
(c)	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?	☐	☐	☒	☐
(d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
(e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes?	☐	☐	☒	☐

Impact Analysis:

a) The Proposed Project includes the construction of the City of Orange Fire Station No. 1, Fire Headquarters, and associated parking lot to replace the current aging and undersized station. The Proposed Project would not require or result in the relocation or construction of new or expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities. The Proposed Project site is a vacant parcel in an urban neighborhood with residential, commercial and public institutional uses close to the Old Towne Orange Historic District and would tie into the existing utilities that are provided in the Proposed Project area. Further, the Proposed Project would be congruous to the Public Facilities and Institutions (PFI) land uses in the neighborhood, and it is expected that any change in demand of the existing utilities caused by the implementation of the Proposed Project would be within the capacity that the City's utility services has projected for the planned land uses. Although the Proposed Project would result in new facilities being connected to the site, nearby uses are connected to these same utilities and the Proposed Project would not result in population growth that would exceed the planned regional capacity.

The Orange County Sanitation District (OCSD) provides wastewater treatment for the City and the closest wastewater treatment plant, Plant No. 1 is located approximately 6.8 miles southeast of the Proposed Project site in Fountain Valley. The capacity of Plant No. 1 is approximately 120 million gallons per day; and the OCSD is responsible for collecting, treating, and disposing the wastewater generated by 2.6 million people living in its service area (OCSD 2020). The new Orange Fire Station No. 1 and Headquarters would not induce population growth or cause an increase in wastewater disposal that would exceed the planned capacity. The nearest electrical power facility is Southern California Edison (SCE) Substation on Taft Avenue, approximately 2.1 miles northeast of the Proposed Project site. The nearest SoCalGas natural gas facility is approximately 2.9 miles northeast of the Proposed Project site (Google Map 2020). Although new connections for utilities including wastewater treatment, energy, and natural gas will be added to the site, the Proposed Project will not

induce population growth or result in the construction of a facility that would exceed planned capacities for the area.

The Proposed Project would not result in a significant change or increase in the use of existing utilities; relocation or construction of new utilities is not proposed. It is not expected that the increased uses would be significantly greater than the uses of the adjacent businesses because the Proposed Project uses are consistent with the area. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

b) The City relies on a combination of imported water and local groundwater to meet its water needs, and works together with three primary agencies, Metropolitan, Municipal Water District of Orange County (MWDOC), and OCWD to ensure a safe and reliable water supply that will continue to serve the community in periods of drought and shortage (City of Orange 2015). A comparison between the supply and demand for projected years between 2020 and 2040 as shown in the 2015 Urban Water Management Plan shows that the available supply for the City will meet projected demand due to diversified supply and conservation measures (City 2015). While there may be a temporary increase in water usage during construction, it is expected that there would be no significant permanent impact to cumulative water supply requirements once the Proposed Project activities have been completed. In addition, the Proposed Project would comply with local, regional, and state water conservation policies including Title 22 of the California Code of Regulations related to recycling of water, and would include standard BMPs, such as minimizing impervious areas, maximizing permeability throughout the site, implementing drip-irrigation system and water-efficient landscaping, in order to reduce water consumption. Implementation of the Proposed Project would not result in an adverse impact associated with water supplies. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

c) Per the City's General Plan Infrastructure Element, the OCSD provides for the regional collection and treatment of domestic, commercial, and industrial sewage for the City (City of Orange 2010c). While the local collection system is maintained by the City of Orange, OCSD is responsible for safely treating and disposing the wastewater generated by 2.6 million people living in a 479-square-mile area of central and northwest Orange County and has two operating facilities located in the City of Huntington Beach and Fountain Valley (OCSD 2020). The Proposed Project would generate wastewater during construction and operation of the fire station, headquarters and the associated facilities. However, the Proposed Project is a replacement building for an existing facility; it is not anticipated that it would generate significant amounts of wastewater. The wastewater system at the Project location is suitably sized for the Proposed Project, as the wastewater system that the Project will laterally connect into consists of a 30-inch diameter concrete pipe under Chapman Avenue (OCFCD 2000). The new Orange Fire Station No. 1 and Headquarters would not induce population growth or cause an increase in wastewater disposal that would exceed the planned capacity. Prior to construction, the City will obtain letters of service from OCSD to ensure that the Proposed Project will have adequate utility services. Impacts would be less than significant.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

d) The City contracts with private contractors for some services, such as the collection of solid waste, recyclable, and green waste materials and the disposal of household hazardous waste. All solid waste generated during construction would be disposed of by the construction contractor according to the Orange County standard construction practices. Three active landfills are located within Orange county that accept commercial disposal including Olinda Alpha Landfill, Frank R. Bowerman Landfill, and Prima Deschecha Landfill which are permitted to accept 8,00 tons per day (TPD), 11,500 TPD, and 4,000 TPD, respectively (OC Landfills 2020). With each of these landfills available to accept additional disposal, any of these Orange County landfills would be able to accommodate the Proposed Project. The Proposed Project includes the construction of the City of Orange Fire Station No. 1, Fire Headquarters, and associated parking lot to replace the current aging and undersized station, and thus, would not result in the addition of a substantial number of new jobs. Further, the Proposed Project would be congruous to the Public Facilities and Institutions (PFI) land uses in the neighborhood, and any solid waste generated would be within the capacity that the City's utility services has projected for the planned land uses. The California Integrated Waste Management Act (also known as AB 939), requires each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling, or other means. The State law, introduced in 1989, established an integrated waste management hierarchy to guide local agencies in implementation, in order of priority: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. The Proposed Project would comply with AB 939 requirements for the diversion of solid waste from landfills. A less than significant impact would occur.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

e) The Proposed Project would not negatively impact the provision of solid waste services. All solid waste generated during construction would be disposed of by the construction contractor according to the Orange County standard construction practices, including compliance with The California Integrated Waste Management Act (also known as AB 939). The Project activities related to the site of the parking lot involves mainly surface reconfigurations and landscaping improvements. The Proposed Project operations would comply with AB 939/SB 1066 requirements for the diversion of solid waste from landfills. Waste receptacles would be provided on site for operational wastes, including green waste, which would be sorted for recycling and reuse. No significant impact would occur.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
(b)	Due to slope prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
(c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
(d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Impact Analysis:

a) The Proposed Project site is not located within a very high fire hazard severity zone of State or Local responsibility (CalFire 2007, 2011). There are no actions that would interfere with an evacuation or emergency plan. The Project implements the Orange City Fire Department Strategic Plan for emergency response. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: No Impact.
Significance Determination After Mitigation: No Impact.

b) The Proposed Project site is are not located within an area identified as a very high fire hazard severity zone of State or Local responsibility (CalFire 2007, 2011). Additionally, the Proposed Project site is located in an urban neighborhood with residential, commercial and public institutional uses and not within or adjacent to any open spaces which are identified as a very high fire hazard severity zone. The lack of wildland-urban interface in or near the Proposed Project site reduce any risk associated with exacerbation of wildfire risks. Additionally, the Project supports wildland fire suppression. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: No Impact.
Significance Determination After Mitigation: No Impact.

c) As noted in Response 20(a), the Proposed Project site is not in an area at risk of wildfire. The Proposed Project would not require infrastructure that would exacerbate fire risk. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: No Impact.
Significance Determination After Mitigation: No Impact.

d) The Proposed Project site is not in an area prone to wildfire or in close proximity to any waterbodies. Additionally, the topography of the area is relatively flat and does not pose a risk of downstream flooding. No impact would occur.

Significance Determination: No Impact.
Mitigation Measures: No Impact.
Significance Determination After Mitigation: No Impact.

21. MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Does the Project have the potential to substantially 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, substantially 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?	☐	☐	☒	☐

Impact Analysis:

a) As discussed in Section 4, Biological Resources, the sites and their surroundings are predominantly urban with limited to no natural habitats. The Proposed Project would not have the potential to substantially degrade the quality of the environment because the quality of the area is not suitable to sustain special status or sensitive species. However, MM BIO-1 has been incorporated to minimize any potential impacts to nesting birds during construction due to their potential presence in the urban environments.

The Proposed Project site does not contain any structures of historic significance; and, due to the urban nature of the area, resources of significant archaeological and paleontological value are unlikely to be discovered. However, ground-disturbing activities could uncover significant resources. In the event that buried resources are discovered that were not previously identified, implementation of MM CUL-1, GEO-1, and TCR-1 would result in impacts to less than significant for archaeological, paleontological, and tribal cultural resources.

Significance Determination: Potentially Significant.
Mitigation Measures: BIO-1, CUL-1, GEO-1, and TCR-1.
Significance Determination After Mitigation: Less Than Significant Impact.

b) The Proposed Project would include a zoning change of a portion of the main Project site to Public Institutional (P-I) to ensure that the Proposed Project is consistent with the General Plan and existing surrounding uses. Based on the level of impact to other resource areas within the Proposed Project, impacts are found to be less than significant. The Proposed Project includes a new Fire Station No. 1, Fire Headquarters, and associated parking lot to replace the existing aging and undersized station and is not expected to include additional development Projects. The Proposed Project would not result in cumulative impacts in addition to other development within the area as there are no planned developments. Additionally, cumulative impacts were analyzed with respect to the other environmental impact areas and were found to have a less than significant impact.

Significance Determination: Less Than Significant Impact.

Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

c) Effects to human beings are generally associated with air quality, noise, traffic safety, geology/soils, and hazards/hazardous materials. As discussed in the previous environmental topic areas, the Proposed Project would not result in significant impacts to human beings because the Proposed Project would not cause significant impacts to air quality, noise, traffic, geology, and hazards that would impact humans in the area. The Project would provide a net benefit to the local community by improving the City Fire Department's ability to provide fire protection services. Adherence to regulatory codes, ordinances, regulations, BMPs, standards, and mitigation measures listed in the MMRP at the end of the document would ensure that construction and operation would not results in substantial adverse direct or indirect effects on humans. The impacts to human beings as a result of the Proposed Project would be less than significant.

Significance Determination: Less Than Significant Impact.
Mitigation Measures: None.
Significance Determination After Mitigation: Less Than Significant Impact.

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APPENDICES

Appendix A Air Quality, Energy, and Greenhouse Gas Emissions Impact Analysis
Appendix B Geotechnical Investigation
Appendix C Water Quality Management Plan
Appendix D Noise Impact Analysis