

WELL 28 PROJECT

MITIGATED NEGATIVE DECLARATION NO. 1861-18



Lead Agency:

City of Orange
Community Development Department • Planning Division
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Date:

October 2020

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MITIGATED NEGATIVE DECLARATION NO. 1861-18

Project Title:

Well 28 Project

Lead Agency:

City of Orange
300 East Chapman Avenue
Orange, CA 92866

Project Proponent and Address:

City of Orange Public Works
300 East Chapman Avenue
Orange, CA 92866

Project Location:

The project site is located at 225 West Maple Avenue in the City of Orange, Orange County, California (Figure 1). The project site is adjacent to North Lemon Street to the west and West Maple Avenue to the south.

Existing General Plan Designation:

Public Facilities Max 0.5 FAR and Institutions Max 2.0 FAR (PFI)

Reference Application Numbers:

MND No.1861-18

Contact Person and Telephone No.:

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Existing Zoning Classification:

Public Institution (P-I(SP))
Santa Fe Depot Specific Plan
Chapman University Specific Plan

INTRODUCTION

The City of Orange Water Division designs, constructs, and maintains wells, water lines, booster pumps, and reservoirs that produce and deliver water supply throughout the City. The City's Water Division is implementing infrastructure projects to enhance the reliability, efficiency, and redundancy of the City's water production. The proposed project would construct a new water well and related infrastructure identified as Well 28 that would be powered by a new Southern California Edison (SCE) transformer. The project also includes an 11,780 square foot passive mini-park ("project" or "proposed project") on the project site. Well 28 would pump water to the City's existing water system and would produce approximately 3,000 gallons per minute.

The City has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to address and disclose the potential environmental effects of project implementation in compliance with the California Environmental Quality Act (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 implementation 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

Regional Setting:

The project site is located in the Old Towne area of the City of Orange (City), in the north-central portion of Orange County, approximately 12 miles northeast of the Pacific Ocean. The City shares its boundaries with the Cities of Anaheim to the north and west, Garden Grove to the west, Santa Ana to the west and south, Tustin to the southeast, and unincorporated Orange County to the east.

Regional access to the project site is provided via State Route 55 (SR-55), located approximately 1.25 miles to the east; Interstate 5 (I-5) located approximately 1.3 miles to the southwest; and State Route 57 (SR-57), located approximately 1.4 miles to the west. The regional location of the project site is shown in Figure 1, *Regional Map*.

Existing Site Conditions:

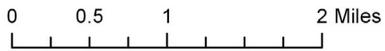
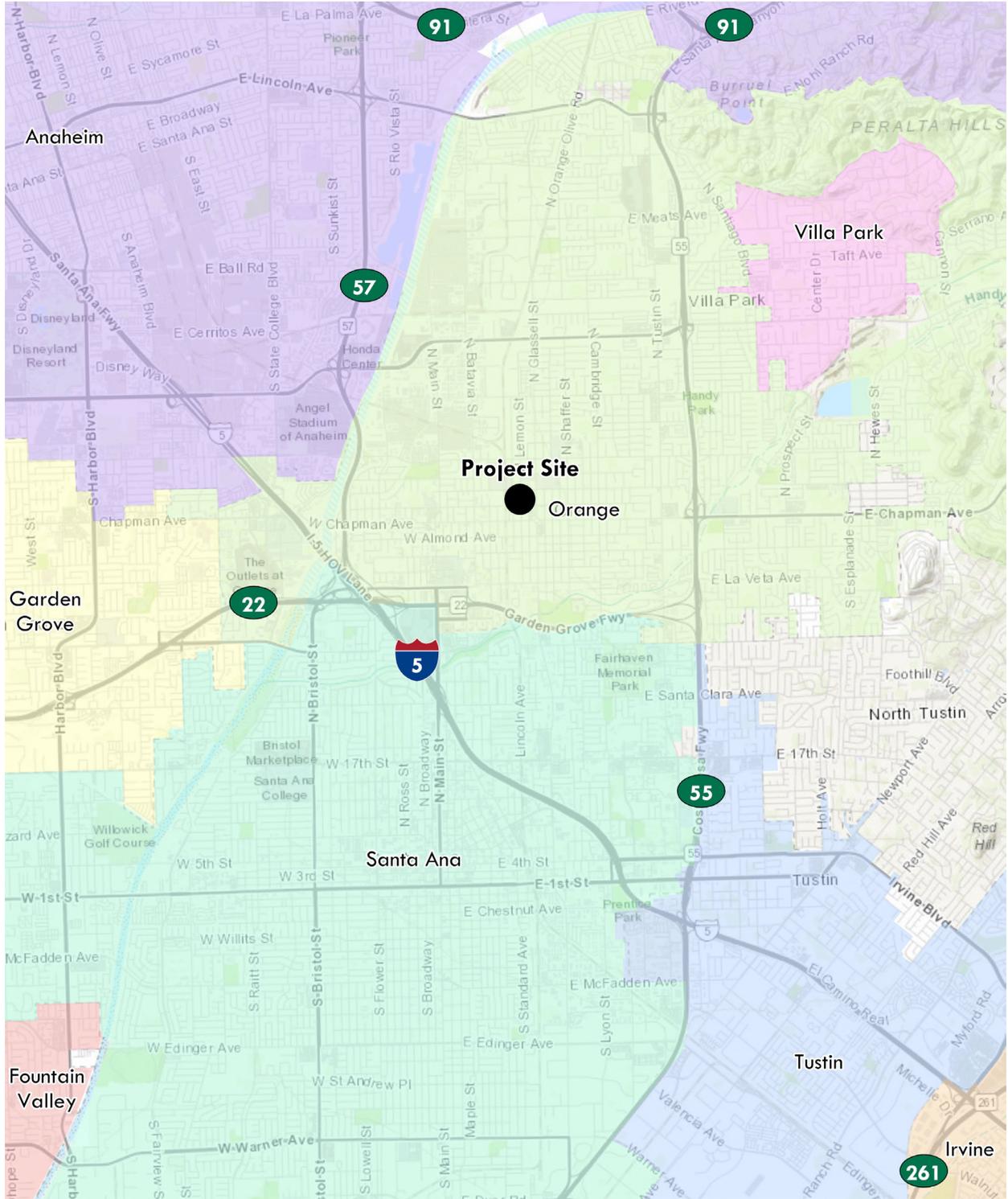
The 0.36-acre project site is vacant and undeveloped. The site is paved with asphalt and has a 6-foot tall chain fence surrounding the site. The project site's existing conditions are shown in Figure 2, *Project Vicinity*.

As detailed in Section 5, *Cultural Resources*, the project site is located within the Old Towne Orange Historic District that is listed in the National Register of Historic Places (NRHP) and is the largest Nationally Registered Historic District in the state of California. As shown on Figure 3, *Existing General Plan Land Uses*, the project site has a General Plan land use designation of Public Facilities Max 0.5 FAR and Institutions 2.0 FAR (PFI). In addition, the zoning designation of the project site is Public Institution (P-I (SP)) Santa Fe Depot Specific Plan and Chapman University Specific Plan, as shown on Figure 5, *Existing Zoning*.

Surrounding Land Uses:

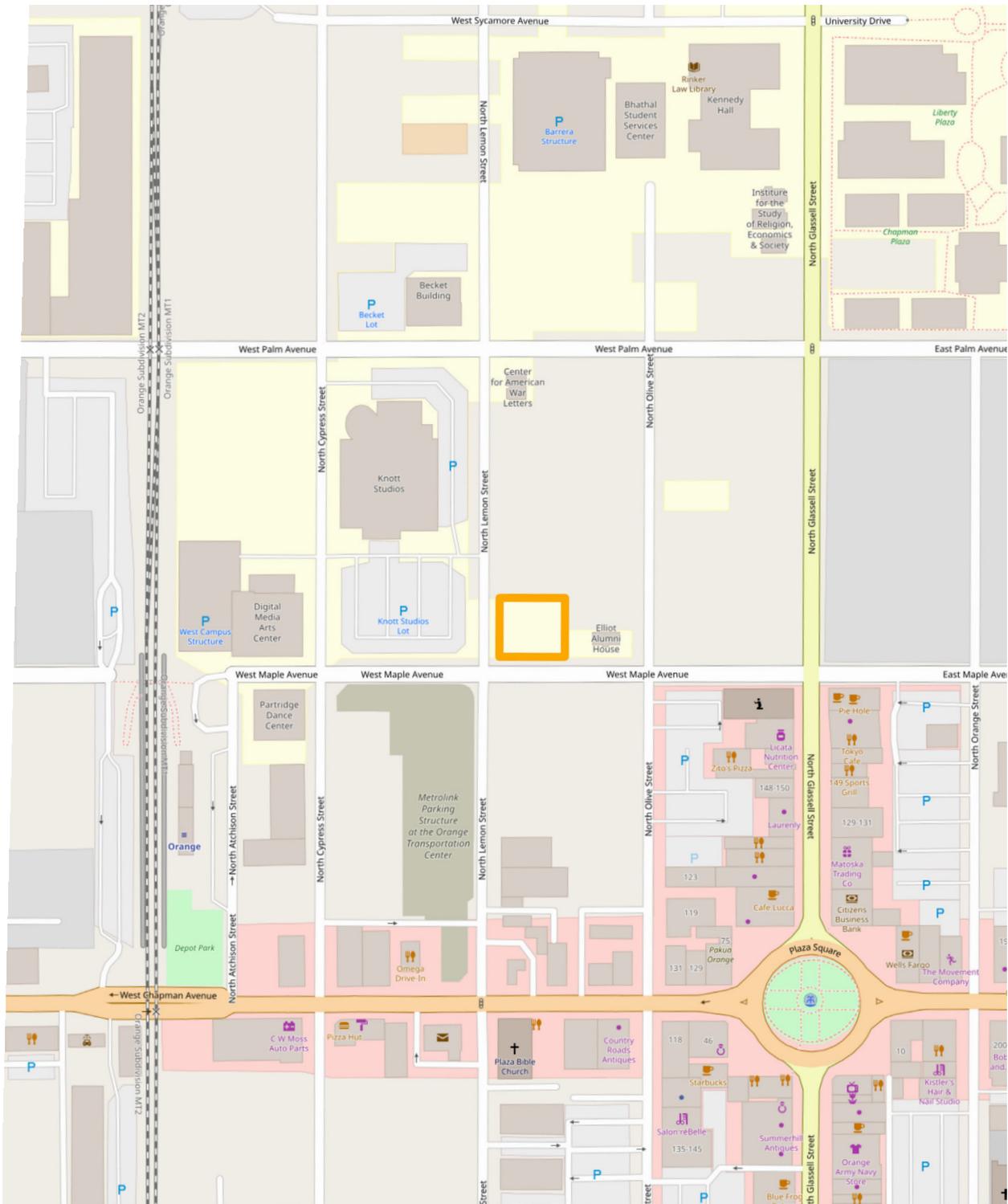
The project site is located in an urbanized area of the City of Orange, which contains a mix of residential, retail and restaurant uses, professional offices, and institutional uses. Land uses surrounding the project site include a parking lot for Chapman University to the west across N. Lemon Street, residential and the Metrolink parking structure to the southwest across W. Maple Avenue, light industrial uses adjacent to the north, and a Chapman University office and residential uses to the east.

Regional Location



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Local Vicinity

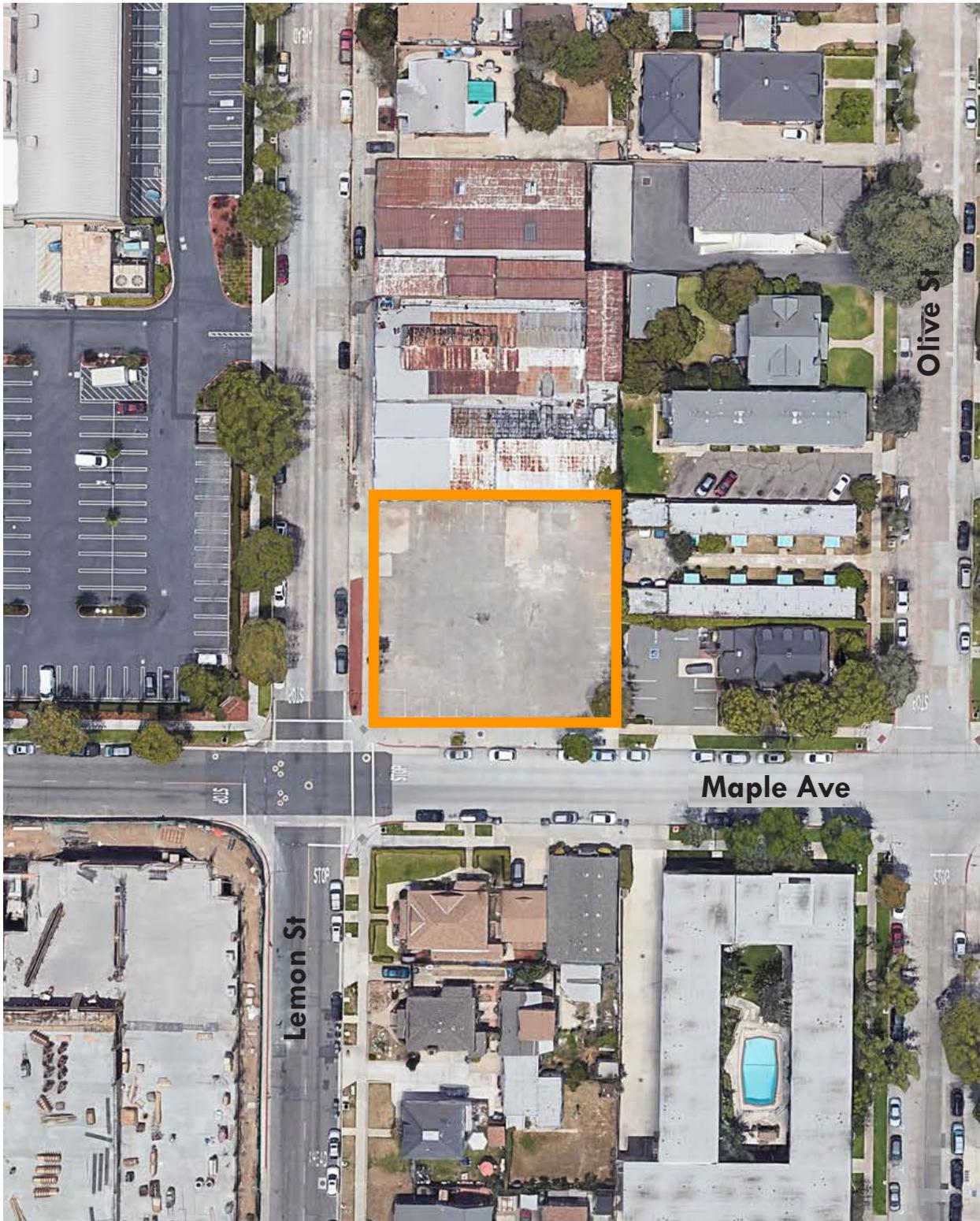


 Project Site



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Aerial View

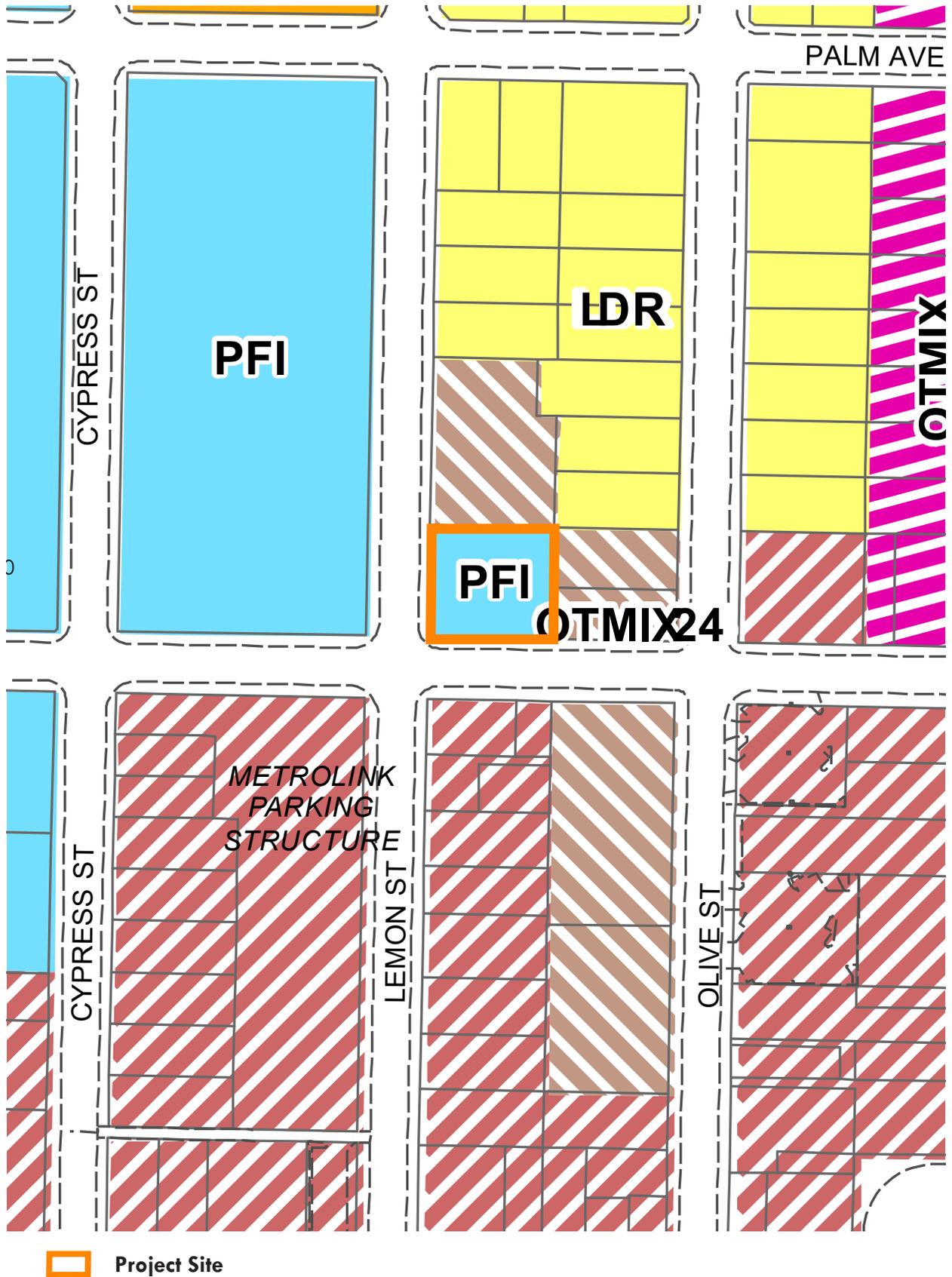


 Project Site



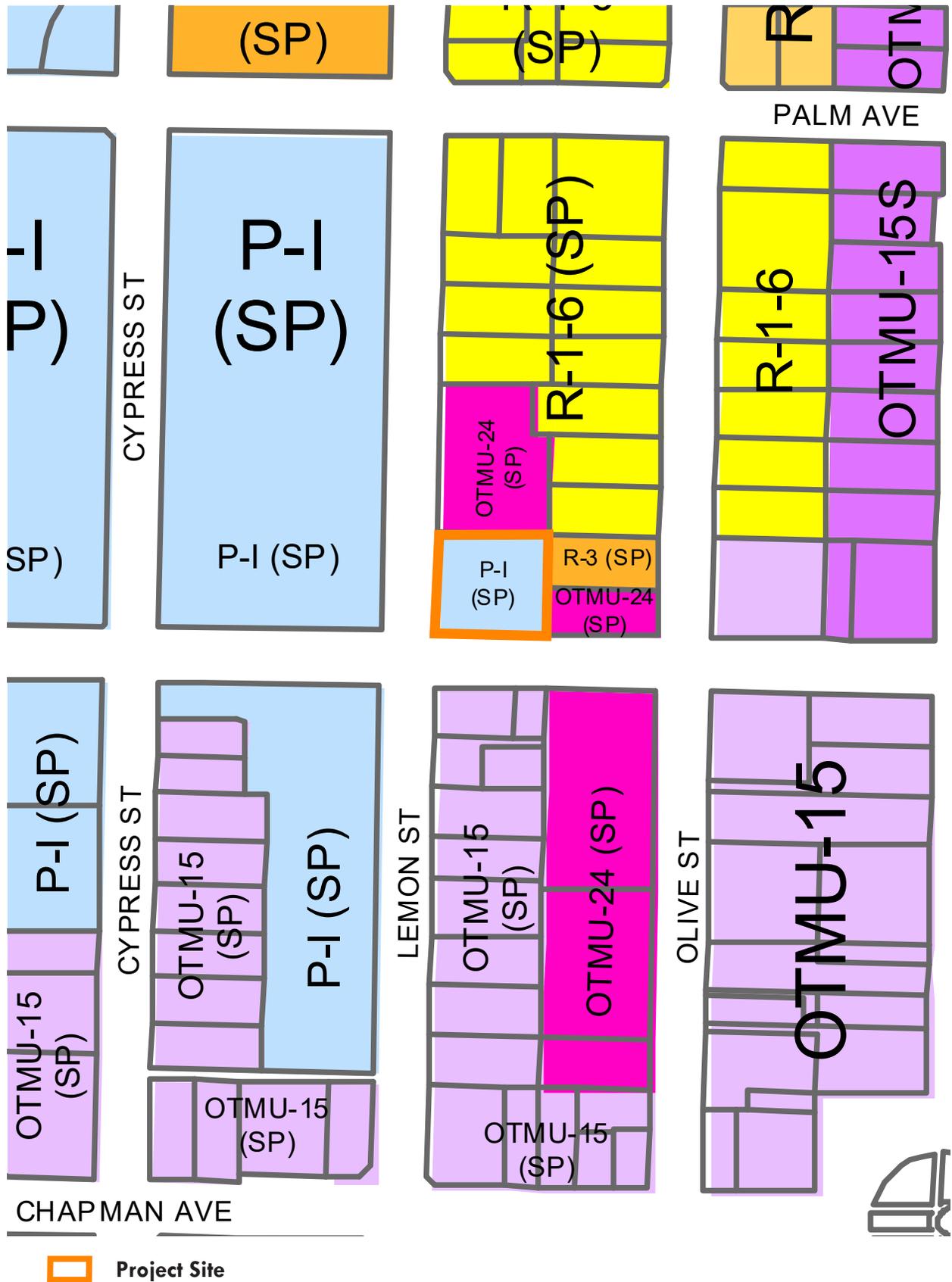
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Existing General Plan Land Use



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Existing Zoning



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PROJECT DESCRIPTION

Project Overview

The project includes demolition and removal of the existing asphalt on the project site, the construction of a new water well (“Well 28”), with a pumping station, utility building, SCE transformer, and a passive mini-park on the 15,695 SF (0.36 acre) project site. Access to the proposed well area would be provided via a 20-foot wide driveway from Maple Avenue, and access to the mini-park would be provided by new paths from Lemon Street and Maple Avenue. Figure 6, *Conceptual Site Plan*, illustrates the proposed project.

Project Features

Well Facilities

The proposed well facilities would be located in the northeast corner of the project site within a 3,900 square foot area that is surrounded by a 16-foot high brick veneer and clinging vine-clad architectural screen wall. The proposed well is a 500-horsepower vertical turbine pump that would be within an approximately 400 square foot 14-foot high sound enclosure structure. The well system also includes pump control valves, steel piping, appurtenances, and an air gap structure. The project would also install a 550 square foot 14-foot high cement block building with an electrical room for the electrical switchboard and a chemical room for disinfection equipment. The disinfection equipment would include a 350-gallon sodium hypochlorite storage tank, metering pump, and piping. The project includes installation of a staging area for equipment, such as pipes, for future well rehabilitation work.

As shown on Figure 6, *Conceptual Site Plan*, the proposed well facilities would be surrounded by a 16-foot high architectural screen wall that would provide security and screen the well facilities from off-site views, as shown on Figure 8, *Elevations*. Access into the well equipment area would be provided by a 14-foot high automatic rolling gate and a man gate entrance to the main switchboard, electrical room, and chemical room.

The well would be drilled to a depth of approximately 1,000 linear feet, and once operational, is expected to produce 3,000 gallons of water per minute. Water produced from the proposed well would be collected through the well head and disinfected and treated using sodium hypochlorite (NaOCl) through an injection tap. Once treated, the water would be discharged via a 16-inch discharge pipeline to the City’s existing water system (370 Zone) for municipal use.

Southern California Edison Transformer

A new Southern California Edison (SCE) transformer would be installed adjacent to the architectural screen wall and driveway next to the well facilities, as shown on Figure 6, *Conceptual Site Plan*. The transformer would be 10-feet wide and 8 feet long and would be screened by landscaping. The transformer would provide electricity to the proposed equipment.

Passive Mini-Park

The southwestern portion of the project site would be developed with an 11,780 SF passive mini-park. The mini-park would incorporate the use of permeable surfaces, such as decomposed granite, and impermeable surfaces, such as concrete panels. The mini-park would also include decorative fencing, decorative panels, park benches, tree planters with seating, removable bollards, lighting, landscaping, and trash receptacles. Access to the mini-park would be provided by a decomposed granite path with entrances on both Maple Avenue and Lemon Street.

Architecture

The proposed 16-foot architectural screen walls (well structure) surrounding the well are designed to screen well equipment and also are meant to mimic a building façade. The well structure would utilize simple materials found within the context of the Santa Fe Depot District in Old Town Orange. Clay brick and running bond application would be used for the veneer on all four elevations of the structure to blend in with the existing masonry of the residential, commercial, and institutional buildings throughout the Old Towne Orange Historic District, in addition to the Metrolink parking structure on the southwest corner of the Maple Avenue and Lemon Street intersection. The 16-foot high architectural screen walls would include metal trellis wall treatments that would be vegetated. These areas would be recessed approximately 6-inches and would be clad with the same brick veneer as the rest of the building. Metal doors are proposed on the south elevation along Maple Avenue, which would be painted a terra-cotta color to match the brick and would be intentionally non-descript. Brick wall bonding patterns would be enhanced at the elevation of the man-door for visual interest.

Landscaping

Once constructed, the project site would be landscaped with ornamental shrubs and trees and have open turf areas for recreational activities. In addition, as discussed above, the proposed architectural screen walls would incorporate the use of trellis wall treatments that would be vegetated. Figure 7, *Landscape Plan*, illustrates the proposed landscaping on the project site.

Stormwater Infrastructure

An 18-inch storm drain would be constructed within the northern portion of the project site that would connect to the existing 36-inch storm drain that is located in Lemon Street. Flushed well water from the well facility would be collected by the proposed 18-inch storm drain and conveyed to the existing 36-inch storm drain within Lemon Street.

Construction

Construction of the well would involve removal of the existing asphalt and the drilling of the well head. Drilling activity would occur 24 hours a day, 7 days a week for a period of three weeks in order to reach a depth of 1,000 linear feet below the existing ground surface. Once drilling activities commence, drilling must be continuous and uninterrupted to prevent well wall collapse. Construction activities apart from well drilling would occur from 7:00 a.m. to 5:00 p.m. and would be concluded in approximately 1.5 years.

Removal of the existing asphalt and well drilling spoils would involve 40 trucks of hauling with 10 cubic yard (CY) dump trucks. As such, it is assumed that the project would generate approximately 400 CY of debris for export and disposal.

The project would be constructed in two phases; well drilling and development; and well equipping, which includes construction of the mini-park. The construction phases are discussed in further detail below.

Well Drilling and Development (Phase I)

As discussed above, the first phase of well construction would involve removal of the existing asphalt and the drilling of the well head. Drilling operations would occur 24 hours a day, 7 days a week for a period of three weeks.

Construction activities associated with well drilling and development would include:

- Mobilization, conductor delivery, and installation
- Installation of approximately 500 linear feet of 24-foot high sound walls around well site
- Well drilling
- Installation of the casing, appurtenances, gravel pack, and grout installation
- Well testing
- Well mechanical development
- Well surveying and testing
- Demobilization, removal of the temporary sound walls, and cleanup

The well drilling phase includes drilling of a potable water well to a depth of 1,000 linear feet below the existing ground surface. A temporary 24-foot high sound wall would be installed to enclose the well area during well drilling operations to reduce construction noise. Once the well has been drilled, a series of surveys and tests would be performed. Groundwater generated from well drilling and testing would be held in tanks and later discharged into the existing storm drain on Lemon Street. The next step in the well drilling phase includes installation of the well casing, gravel feed tube, camera tube, pressure transmitter/sounding tube, air vent tube, gravel pack, and annular grout seal. To complete the well drilling phase, a series of test pumping, surveys, groundwater sampling, and final well disinfection and capping would be performed.

Water for well drilling would be provided by a fire hydrant to be installed in the southwest corner of the site prior to the start of drilling activities.

Well Equipping (Phase II)

The second phase of well construction includes well equipping, which would occur from 7:00 a.m. to 5:00 p.m. and would be concluded in approximately 1.5 years.

Construction activities associated with well equipping would include:

- Mobilization and demolition of existing asphalt concrete (AC) paving
- Construction of the well sound enclosure
- Installation of the well base, pump, appurtenances, and motor
- Installation of the well discharge piping, waste discharge piping, yard piping, and valves
- Installation of the well electrical equipment and conduits
- Installation of the air gap and drain catch basin
- Construction of the electrical/chemical buildings
- Installation of electrical equipment, SCE transformer, and chemical facilities
- Installation of the 16-foot-high architectural screen wall, rolling gate, main gate, 5 foot high metal fence
- Final grading and AC pavement
- Demobilization and cleanup
- Construction of the mini-Park

This phase of construction includes the installation of the well pump and motor, well head sound enclosure to surround the pump and motor, pump control valves, steel pipes, appurtenances, an air gap structure, and a new SCE transformer. The electrical and chemical buildings would be constructed in this phase to house the SCE electrical switchboard, electrical equipment, and a 350-gallon sodium hypochlorite storage tank with a meter pump. The passive mini-park would be constructed as the last portion of this phase.

Operation

Once operational, the proposed project would operate as needed 24 hours per day, 7 days a week. At the onset of well operations, typical procedure is to “pump-to-waste” for a short duration to flush the well system. The flushed wastewater from the well would be collected by a 10-inch pipe adjacent to the well head that would transfer the wastewater to an above ground air gap into a catch basin below. The catch basin would collect the wastewater, which would be conveyed to the proposed 18-inch storm drain on the northern portion of the project site to an existing 36-inch storm drain within Lemon Street.

Once the pump-to-waste process has occurred, water produced from the proposed well would be collected through the well head and disinfected and treated using 12.5% sodium hypochlorite (NaOCl) through a sodium hypochlorite injection tap. Once treated, the water would be discharged via a 16-inch pipeline to the 370 Zone of the City’s Water System for municipal use.

Operation of proposed facilities would only require periodic maintenance with daily staffing similar to the City’s existing conditions at similar City well and park facilities. The proposed well system and passive mini-park would be maintained by City Public Works Department.

Discretionary Actions:

Discretionary actions for the project include:

- Adoption of the Mitigated Negative Declaration No. 1861-18. Environmental review is required in order to comply with the California Environmental Quality Act (CEQA), per OMC Section 17.010.080.

Pursuant to Government Code sections 53090(a) and 53091(a) the City is not required to comply with the strict application of its zoning ordinances. Hence, Design Review and Major Site Plan Review applications were not initiated for this project since the City is both the project proponent and the deciding body for the project. Instead, the project has been reviewed by staff and designed in a manner compatible with the water producing needs, height, massing, architecture and landscaping that integrate with the project surroundings for the public benefit.

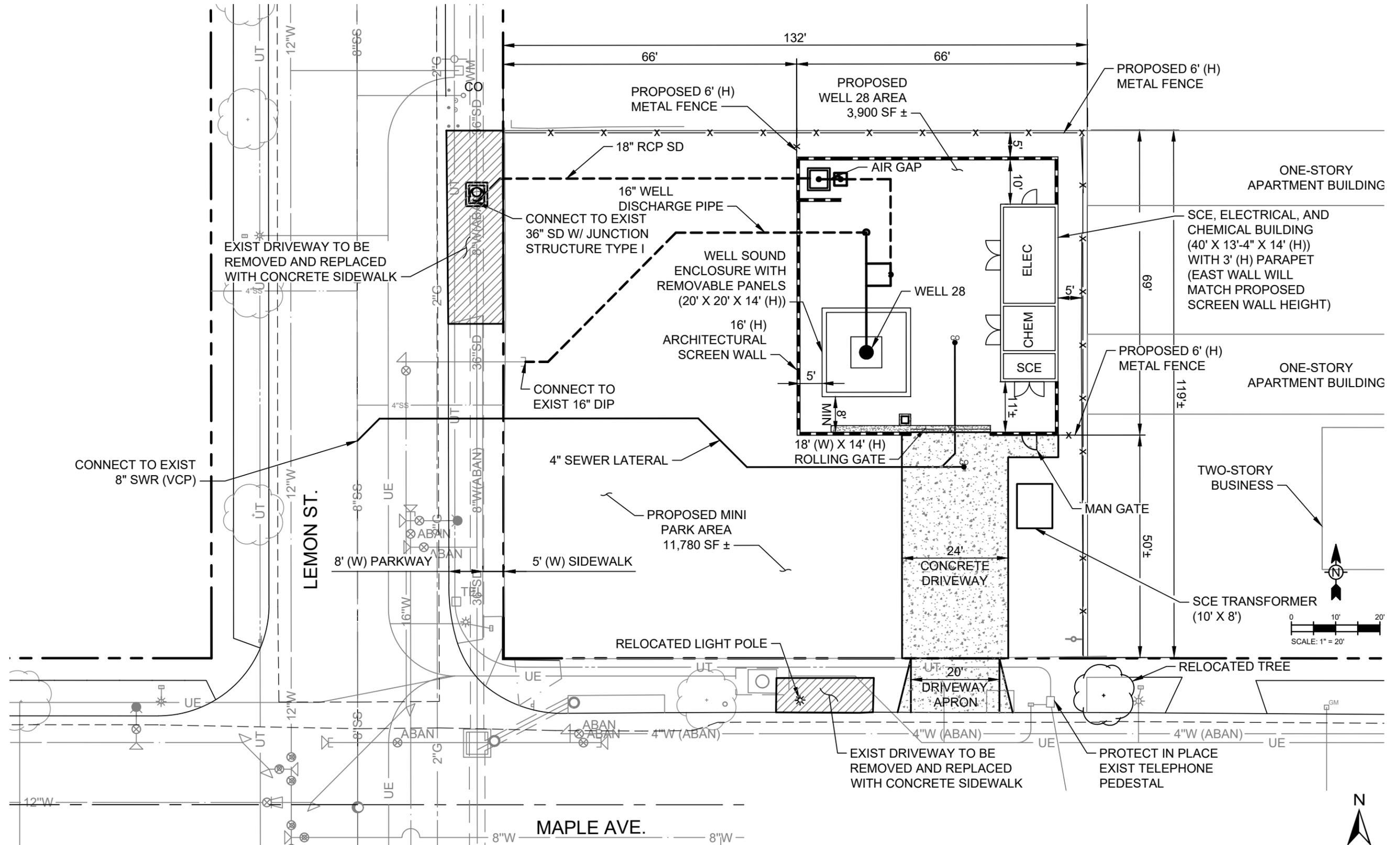
Other Public Agencies Whose Approval is Required (Responsible or Trustee Agencies):

None.

Scheduled Public Meetings or Hearings:

This Initial Study/Mitigated Negative Declaration (MND) will be considered for approval along with the project’s entitlements and schematic design plans at a noticed public hearing, which will be scheduled and noticed at a later date.

Conceptual Site Plan

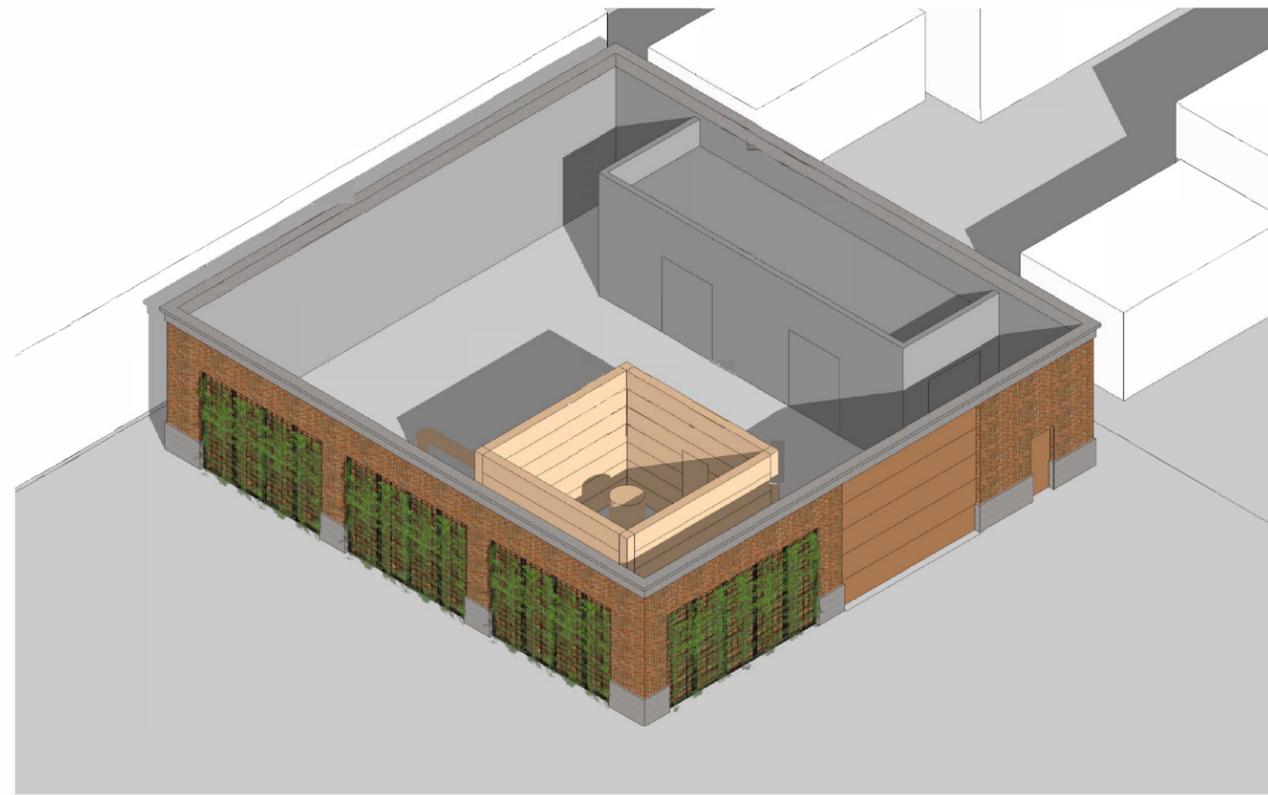


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Landscape Plan

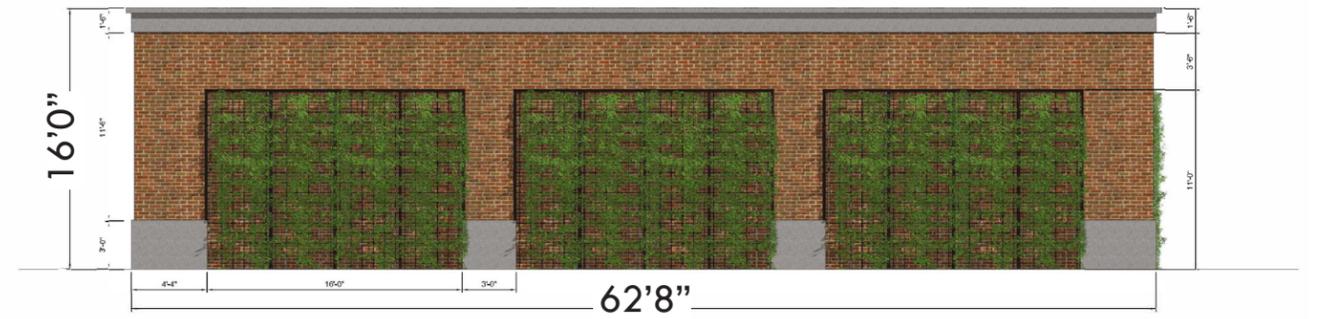


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isometric view

scale: nts



lemon st. - elevation

scale: 3/16"=1'-0"



maple ave. - elevation

scale: 3/16"=1'-0"

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forest Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> 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.



 Ashley Brodtkin, Associate Planner

10/26/20

 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 identify 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. <i>Except as provided in Public Resources Code Section 21099, would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Impact Analysis

a) Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting. A scenic vista can be impacted in 2 ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or “vista” of the scenic resource. Important factors in determining whether the proposed project would block scenic vistas include the project’s proposed height, mass, and location relative to surrounding land uses and travel corridors.

The City’s General Plan defines scenic vistas as those “...hillsides, ridgelines or open space areas that provide a unifying visual backdrop to the urban environment”. The project site is in an urbanized area where views are limited due to the surrounding residential, institutional, commercial, and light industrial developments. Views are also limited on roadways within the project vicinity due to ornamental landscaping and urbanized features such as power lines. The topography of the site and surrounding area is flat, and does not contain hillsides, ridgelines, or open space. The proposed well, once developed and tested, would be surrounded by a 16-foot high vegetated architectural wall, which would screen the proposed well equipment, and would not be taller than the one and two story structures that are located on surrounding parcels. Thus, the proposed structures would not impede any views of scenic vistas. In addition, the SCE transformer and proposed trees in the mini-park area would not be tall enough to extend into scenic vistas and would blend into the existing urban environment. Thus, redevelopment of the project site with the proposed well infrastructure and mini-park would not obstruct, interrupt, or diminish a scenic vista; and impacts would not occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) There are no officially designated state scenic highways in the vicinity of the proposed project (Caltrans 2011). The City’s General Plan identifies Santiago Canyon Road east of Jamboree as a

potential City scenic highway. However, Santiago Canyon Road east of Jamboree is not located within the vicinity of the project site. Therefore, impacts related to scenic resources within a state scenic highway would not occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

c) As described previously, the project site is in an urbanized area and is surrounded by residential, institutional, and industrial developments. The project site is vacant, fenced, and paved with asphalt. The existing character of the project site is neither unique nor of special aesthetic value or quality. Temporary changes to the visual character from construction activities, including construction equipment, staging, and installation of a temporary sound wall would be short-term and change as construction proceeds. As the site is a vacant paved and chain linked site, and because construction would be short-term, impacts would be less than significant.

The proposed 16-foot architectural screen walls surrounding the well would screen the well equipment and are also meant to mimic a building façade (well structure). The design would utilize simple materials found within the context of the Santa Fe Depot District in Old Town Orange. Clay brick and running bond application would be used for the veneer on all four elevations of the well structure. The proposed well facility has been designed with a brick veneer exterior wall finish to blend in with the existing masonry of the residential, commercial, and institutional buildings throughout the Old Towne Orange Historic District, including the Metrolink parking structure on the southwest corner of the Maple Avenue and Lemon Street intersection and the the Southern California Edison building located on the northeast corner of Batavia and Maple. The 16-foot high architectural screen walls would include metal trellis wall treatments that would be vegetated. These areas would be recessed approximately 6-inches and would be clad with the same brick veneer as the rest of the building. Metal doors proposed on the south elevation would be painted a terra-cotta color to match the brick and would be intentionally non-descript. The project would also develop a passive mini-park with drought tolerant plants, and pervious pavement or pavers. The building's simple design is meant to harmonize with the proposed landscape of the park.

Implementation of the project would improve the character of the site from that of a vacant, chain link fenced site to that of a landscaped open space area. As the exterior wall finish would have a brick veneer that would blend into the existing development in the area and the well facility would be screened behind a vegetated architectural screen wall, the visual focus of the site would be the mini-park area, which would improve the character of the views of the project site.

The project site is zoned as Public Institution (P-I (SP)), Santa Fe Depot Specific Plan, and Chapman University Specific Plan¹. The requirements for the P-I zone include a minimum building lot area of 6,000 SF, and a building height maximum of 32 feet in areas within 120 feet of any residentially zoned area. As described previously, the proposed project site is 15,695 SF; thus, within the 6,000 SF minimum building area. In addition, the proposed permanent structures would be a maximum of 16-feet in height, which is within the 32-foot height maximum. Furthermore, the proposed well facilities and mini-park provides public uses. Therefore, the proposed project is consistent with the PI zoning.

¹ The project site will be removed from Chapman University Specific Plan in an amendment which is currently being processed by the City and thus, its consistency with Chapman University Specific Plan is not analyzed further.

To protect the existing resources within the Old Towne Orange Historic District, the City has adopted specific design guidelines for new development or redevelopment projects. Table AES-1 provides a comparison of the proposed project and each of the Historic Preservation Design Standards for Old Towne.

Table AES-1: Project Consistency with Historic Preservation Design Standards

Old Towne Design Standard	Consistency
<p>1. The location of new primary and secondary structures on a lot should be consistent with the historic pattern of front and side yard setbacks.</p>	<p>The location of the well facilities would be in the northeast corner of the site and would be setback from North Lemon Street and West Maple Avenue. The setback would be similar to the adjacent historic building at 204 North Olive Street, which is located near the northeast corner of the lot leaving the western half an open space (currently utilized as a parking lot). Multiple large trees are located in the otherwise unoccupied space at the south and eastern areas of 204 North Olive Street. The setback on the site would include a park area with of decorative fencing, benches, decompressed granite paths, a, open turf area, and landscaping that includes trees. A small park integrated into the street grid reflects the character of existing historic parks within Old Towne, like Veterans Park or Plaza Park. It improves the streetscape by eliminating fenced vacant property from context of historic district and repurposing it with a compatible park use. The well enclosure is an accessory building within the context of the park. As the context immediately surrounding the project area is of mixed used with a variety of architectural styles, building types, and setbacks, the well and associated park is consistent with the historic pattern of the surrounding area.</p>
<p>2. New buildings should be similar in mass and scale to surrounding buildings.</p>	<p>The proposed well structure would be similar or smaller in mass than scale than surrounding buildings. The proposed structure would have a 16-foot high vegetated architectural screen wall that would screen the proposed well facilities from off-site view. The majority of historic buildings surrounding the site are one story in height, two of which (214-218 North Olive Street), have a flat roof. The proposed structure is comparable to the large 2-story detached garage located at 193 North Lemon Street, which is across Maple Street from the site. The structure would also be approximately a quarter of the size of the historic industrial building north of the site, at 233 North Lemon Street, but, it would be larger than the residential buildings to the east and south of the site (at 193 North Lemon Street and 204 North Olive Street). In addition, the project would be 16-feet high, notably shorter than the Metrolink parking structure across the street from the site (at 130 North Lemon Street), which has three above ground levels of parking and is 28 feet with brick veneer exterior walls.</p>
<p>3. The height and roof form of a new building should be comparable to surrounding historic buildings.</p>	<p>As described in the previous response, the highest proposed structure would be 16-feet high. The enclosure wall's lack of a sloped roof reduces overall height of the structure to below that of adjacent historic buildings. The majority of historic buildings surrounding the site are one story in height, and two of which (214-218 North Olive Street), have a flat roof. The project's flat roof appearance is also consistent with the roof form of other historic</p>

	industrial/commercial buildings in area. In addition, the structure would be lower than the 28-foot high Metrolink parking structure that is across the street from the site at 130 North Lemon Street.
4. A new primary building should have a main entrance and façade parallel to and facing the street.	The main entrance and south façade of the proposed well facilities would face Maple Avenue.
5. The progression of public to private spaces from the street should be maintained.	Currently, the site is fenced. As described previously, the well facilities would be in the northeast corner of the site and would be setback from North Lemon Street and West Maple Avenue. The setback on the site would include a park area with of decorative fencing, benches, decompressed granite paths, a, open turf area, and landscaping that includes trees. This would improve the progression between the existing roadways and onsite uses.
6. New construction should have a similar pattern of windows and doors on elevations visible from the street to those found in surrounding historic buildings.	Metal doors on the south elevation (Maple Avenue) would be painted a terra-cotta color to match the brick on surrounding historic buildings and are intentionally non-descript. The form of the building follows the public works function to screen the infrastructure facilities. Trellises on west elevation and brick pilasters are intended to create a pattern similar to large ground floor industrial or commercial window openings. While they are not true openings, this balances the needs of well operations with rhythm of openings in historic commercial/industrial buildings in area. Also, the proposed structure would have a 16-foot high vegetated architectural screen wall that would screen the proposed well facilities from off-site view.
7. The use of traditional building materials found on historic buildings in the Historic District is encouraged for new construction.	<p>The design of the well structures utilizes simple materials, found within the context of the Santa Fe Depot District in Old Town Orange. Clay brick, running bond application, is used for the veneer on all four elevations of the building. A pre-cast concrete base would be located at the bulkhead. The cornice would be precast concrete to match the bulkhead, and a precast beam would be located above the large sectional door at the south façade.</p> <p>This is consistent with the design of the Metrolink parking structure located across the street at 130 North Lemon Street to create an integrated design for City-owned facilities in this context. Materials for both facilities are intended to reflect the use of brick and pre-cast concrete in historic industrial/commercial buildings. In keeping with the well enclosure's industrial use, building would have minimal ornamentation. As specific material choices are developed, the design will avoid recreating specific historic features, but will emphasis elements that are compatible with nearby historic buildings. The parking structure has brick veneer exterior walls, the openings are squared off with metal mullions, and brick pilasters with a precast concrete base are incorporated into the building.</p>
8. The height, mass and scale of new secondary buildings should be minimized as much as possible.	As detailed previously, the highest proposed structure would be 16-feet high and would be similar in size to a large detached garage.
9. Infill construction should adhere to the sections on Standards for Historic Residential Buildings – Setting or Standards for Historic Commercial Buildings – Setting.	As detailed in the previous responses, the project is consistent with the historic design standards.

Table AES-2 provides a comparison of the proposed project and the applicable Santa Fe Depot Specific Plan Guidelines for infill and new construction related to scenic quality. According to the Santa Fe Depot Specific Plan Guidelines, the treatment of infill and new construction projects should consider the following criteria to ensure compatibility with the surrounding historic area:

Table AES-2: Project Consistency with Santa Fe Depot Specific Plan Guidelines

Guideline	Project Consistency
Guideline 1: The relationship between buildings and the street, with the front and primary entrances oriented to the street.	Consistent. The proposed project would orient entrances toward the street. The main entrance and south façade of the proposed well facilities would face Maple Avenue. Access to the mini-park would be provided by a decomposed granite path with entrances on both Maple Avenue and Lemon Street.
Guideline 2: The relation of street and side yard setbacks to historic buildings.	Consistent. The location of the well facilities would be in the northeast corner of the site and would be setback from North Lemon Street and West Maple Avenue. The setback would be similar to the adjacent historic building at 204 North Olive Street, which is located near the northeast corner of the lot leaving the western half an open space (currently utilized as a parking lot). Multiple large trees are located in the otherwise unoccupied space at the south and eastern areas of 204 North Olive Street. The setback on the site would include a park area with of decorative fencing, benches, decompressed granite paths, a, open turf area, and landscaping that includes trees.
Guideline 3: The mass and scale of new designs in relation to historic buildings. New designs should draw upon massing and scale of similar buildings in the area.	Consistent. The proposed well structure would be similar or smaller in mass than scale than surrounding buildings. The proposed structure would have a 16-foot high vegetated architectural screen wall that would screen the proposed well facilities from off-site view. The majority of historic buildings surrounding the site are one story in height, two of which (214-218 North Olive Street), have a flat roof. The proposed structure is comparable to the large detached garage located at 193 North Lemon Street, which is across Maple Street from the site. The structure would also be approximately a quarter of the size of the historic industrial building north of the site, at 233 North Lemon Street, but, it would be larger than the residential buildings to the east and south of the site (at 193 North Lemon Street and 204 North Olive Street). Therefore, the massing and scale of the proposed building would be similar to buildings in the area.
Guideline 4: The height and width of new buildings should complement nearby historic buildings.	Consistent. The proposed well structure would be 550 square feet and 16 feet high. The height would be similar to the height of surrounding buildings. This design would complement nearby historic buildings by not distracting the viewer from other buildings of historic scenic quality.
Guideline 5: Primary building forms, including roof forms, should refer to historic forms found in the area. Contemporary interpretations of building forms reflecting the design traditions of the area may also be used.	Consistent. The proposed well structure has been designed with a brick veneer exterior wall finish to blend in with the existing masonry of the residential, commercial, and institutional buildings throughout the Santa Fe Depot Specific Plan area. The 16-foot high

	<p>architectural screen walls would screen the proposed well facilities from off-site views. The building was designed to be compatible with the Metrolink Parking Structure and other similar buildings in Old Towne. Clay brick, running bond application, would be used for the veneer on all four elevations of the building. A pre-cast concrete base is proposed at the bulkhead. The cornice would match the bulkhead, and be precast concrete, with a precast beam above the large sectional door. The cornice height is approximately 18-inches. The profile is similar to the cornice at the Metrolink Parking structure and would be adjusted to suit the bulk, mass and scale of the smaller well structure. Metal doors proposed on the south elevation would be painted a terra-cotta color to match the brick and would be intentionally non-descript.</p>
<p>Guideline 6: Designing with a palate of materials used historically. New materials, when used, should appear similar in character, form and texture, to historic materials.</p>	<p>Consistent. As described above, the proposed well structure has been designed with a brick veneer exterior wall finish, which appears similar in character, form, and texture to historic materials.</p>
<p>Guideline 7: A variety of windows types should be encouraged. Contemporary interpretations of industrial sash, wood sash and display windows may be considered.</p>	<p>Not Applicable. The proposed project would not include any windows. The form of the building is to provide for screening of the infrastructure facilities and does not have a need for windows or an announced entry, such as business or residence would have. Therefore, guideline 7 is not applicable to the project.</p>

As described, the project has been designed to adhere to the design standards, and the scale, massing, and setback of the well facility structure and park would not adversely impact the significance of the historic structures located adjacent to the project site. Conceptual materials of park reflect historic materials of industrial sites in area including standard concrete paving, metal planters, and wood and concrete benches. The park design is intended to use compatible materials in contemporary design elements. Fencing is setback from the sidewalk to allow landscaped border at the edge of the project site, consistent with recommendations for fencing in Historic Preservation Design Standards. Thus, the project would not conflict with applicable zoning or other regulations governing scenic quality and would not degrade the visual character or quality of the site or surrounding area. Thus, impacts would be less than significant

Significance Determination: Less than significant impact.
Mitigation Measures: No mitigation measures are required.
Significance Determination After Mitigation: Less than significant impact.

d) The project site is located within a developed urban area, adjacent to a residential, industrial, and institutional uses, as well as roadways. Existing sources of light in the vicinity of the project site include streetlights, security lighting, landscape lighting, and lighting from building interiors that pass-through windows.

The proposed project has the potential to create a new source of substantial lighting or glare during construction that could adversely affect nighttime views at the adjacent residences. Lighting would be required during the 24-hour drilling phase of the well construction. Lighting on the project site would be designed, located, and shielded in compliance with the City’s Municipal Code Section 17.12.030. Because the project site is within an urban area with various sources of existing nighttime lighting, and

would be required to comply with the City’s lighting regulations that would be verified by the Orange Police Crime Prevention Bureau during the permitting process, the increase in light that would be generated by the project would not adversely affect day or nighttime views in the area. Overall, lighting impacts would be less than significant.

Reflective light (glare) can be caused by sunlight or artificial light reflecting from finished surfaces such as window glass or other reflective materials. Generally, darker or mirrored glass would have a higher visible light reflectance than clear glass. Buildings constructed of highly reflective materials from which the sun reflects at a low angle can cause adverse glare. The proposed project would not use highly reflective surfaces. In addition, as described previously, onsite lighting would be angled down and shielded, which would avoid the potential on onsite lighting to generate glare. Therefore, the project would not generate substantial sources of glare, and impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

Existing Plans, Programs, or Policies

PPP AES-1: Exterior Lighting. Exterior lighting on the project site shall conform to the regulations within Municipal Code Section 17.17.030. Lighting on any premises shall be directed, controlled, screened or shaded in such a manner as not to shine directly on surrounding premises.

Sources

California Department of Transportation (Caltrans). 2011. *List of eligible and officially designated State Scenic Highways*. Accessed: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways> (accessed July 16, 2020).

City of Orange General Plan. Accessed: <https://www.cityoforange.org/391/General-Plan>

City of Orange Municipal Code. Accessed: https://library.municode.com/ca/orange/codes/code_of_ordinances

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Impact Analysis:

a) The project site is currently paved with asphalt and located in an urbanized area. The project site and vicinity are void of agricultural uses. The California Department of Conservation Important Farmland mapping identifies the project site and surrounding areas as Urban and Built-Up land (CDC 2020). No areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would be affected by the project or converted to a non-agricultural use. Thus, no impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) As described in the previous response, the project area is void of any agricultural uses. The project site is currently zoned Public Institution (P-I (SP)), Santa Fe Depot Specific Plan, and Chapman University Specific Plan, and surrounded by areas zoned and developed with urban uses that include residential, commercial, light industrial, and institutional development. No agricultural zoning is located in the vicinity of the project area and no parcels in the project vicinity have Williamson Act contracts. Therefore, implementation of the project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Thus, no impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

c) The project site is developed and located in an area that is completely developed for urban uses. The project site and vicinity are void of forest land or timberland. In addition, the project site is zoned Public Institution (P-I (SP)), Santa Fe Depot Specific Plan, and Chapman University Specific Plan, and surrounded by areas zoned for urban uses. Therefore, the project would not conflict with forest land, timberland, or zoning for forest or timberland uses. Thus, no impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

d) As described in the previous response, the project area is void of any forest land and is not zoned for forest uses. Thus, the project would not result in the loss of forest land or conversion of forest land to non-forest uses. No impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

e) As described in the previous responses, the project area does not include and is not near any farmland or forest land or land zoned for either farm or forest uses. No other changes to the existing environment would occur from implementation of the proposed project that could result in conversion of farmland to nonagricultural use or forest land to non-forest use. Thus, no impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

None.

Sources

California Department of Conservation (DOC) Important Farmland Finder, 2020. Accessed: <https://maps.conservation.ca.gov/dlrp/ciff/> (accessed July 16, 2020).

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Air Quality Impact Analysis, prepared by Urban Crossroads (AQ 2020), included as Appendix A.

Impact Analysis:

a) The project site is located in the South Coast Air Basin (SCAB), which is under the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The SCAQMD and Southern California Association of Governments (SCAG) are responsible for preparing the Air Quality Management Plan (AQMP), which addresses federal and state Clean Air Act (CAA) requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin. In preparation of the AQMP, SCAQMD and SCAG uses regional growth projections to forecast, inventory, and allocate regional emissions from land use and development-related sources.

As described in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD’s CEQA Air Quality Handbook (1993), for purposes of analyzing consistency with the AQMP, if a proposed project would result in growth that is substantially greater than what was anticipated, then the proposed project would conflict with the AQMP. On the other hand, if a project’s density is within the anticipated growth of a jurisdiction, its emissions would be consistent with the assumptions in the AQMP, and the project would not conflict with SCAQMD’s attainment plans. In addition, the SCAQMD considers projects consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation.

As described previously, the project would develop a well facility to enhance the reliability, efficiency, and redundancy of the City’s water production, and develop a mini-park on the site. The new facilities would serve the existing development in the area and would not result in growth. In addition, as described in Response 3(b) below, the proposed project would not generate air quality emissions above SCAQMD significance thresholds. Therefore, impacts related to conflict with the AQMP from the proposed project would be less than significant.

Significance Determination: Less than significant.

Mitigation Measures: No mitigation required.

Significance Determination After Mitigation: Less than significant.

b) The SCAB has a non-attainment status for not meeting federal ozone standards, federal carbon monoxide standards, and state and federal particulate matter standards. Any development in the SCAB, including the proposed project, could cumulatively contribute to these pollutant violations. The methodologies from the SCAQMD CEQA Air Quality Handbook are used in evaluating project impacts. SCAQMD has established daily mass thresholds for regional pollutant emissions, which are listed in

Table AQ-1. The SCAQMD’s CEQA Air Quality Handbook methodology describes that any project that result in daily emissions that exceed any of these thresholds would have both an individually (project-level) and cumulatively significant air quality impact. If estimated emissions are less than the thresholds or reduced to below the thresholds with implementation of mitigation, impacts would be considered less than significant.

Table AQ-1: Maximum Daily Regional Emissions Thresholds

Pollutant	Construction (lbs/day)	Operations (lbs/day)
NO _x	100	55
VOC	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
SO _x	150	150
CO	550	550
Lead	3	3

Construction

Construction activities associated with the proposed project would generate pollutant emissions from the following: (1) demolition of existing asphalt on project site; (2) grading and well drilling; (3) construction workers traveling to and from the project site; (4) delivery and hauling of construction supplies to, and debris from, the project site; (5) fuel combustion by onsite construction equipment; and (6) building and mini-park construction. During Phase 1 of construction, the project would generate approximately 34 daily trips, including 4 trips during the AM peak hour and 4 trips during the PM peak hour. During Phase 2 the project is anticipated to generate 80 daily trips, with 8 trips during the AM peak hour and 8 trips during the PM peak hour. The amount of emissions generated on a daily basis would vary, depending on the intensity and the types of construction activities occurring.

It is mandatory for all construction projects to comply with several SCAQMD Rules, including Rule 403 for controlling fugitive dust, PM₁₀, and PM_{2.5} emissions from construction activities. Rule 403 requirements include, but are not limited to: applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site, covering all trucks hauling soil with a fabric cover and maintaining a freeboard height of 12-inches, and maintaining effective cover over exposed areas. Compliance with Rule 403 and Rule 1113 were accounted for in the construction emissions modeling for the project. As shown in Table AQ-2, CalEEMod results indicate that construction emissions generated by the proposed project would not exceed SCAQMD regional thresholds. Therefore, emissions from construction activities would be less than significant.

Operation

Mobile emissions would be generated by the motor vehicles traveling to and from the project site for periodic well maintenance and park maintenance, which would be on-going throughout project operations. However, the maintenance would be limited and result in about two weekly trips that would not result in substantive new long-term emissions sources. The passive mini-park is intended to be used by residents, students, and employees that are within walking distance of the site. The park is across the street from the transit center parking structure and may be used by commuters waiting for transit, or after transit and before work or school activities. The project does not include any parking; and therefore, does not provide for vehicle use that would generate emissions. As discussed above and shown in Table

AQ-2, emissions from construction activities, including mobile sources, would be less than significant. The limited weekly trips that would be generated during project operations would be far less intense than the 80 daily trips generated by the most intense construction phase (Phase 2). As a result, impacts from mobile sources during operations have been determined to be less than significant.

Stationary energy emissions would result from energy consumption from operating the well equipment. Operational emissions associated with the proposed project were modeled using CalEEMod and are presented in Table AQ-3 below. As shown, the proposed project would result in long-term regional emissions of the criteria pollutants that would be below the SCAQMD’s applicable thresholds. Therefore, operational impacts would be less than significant.

Table AQ-2: Overall Construction Emissions Summary

Construction Activity	Year	Emissions (lbs/day)					
		VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer							
Well Drilling & Development	2021	2.39	22.47	20.17	0.05	1.31	1.05
Well Equipping	2021	3.65	32.80	36.89	27.93	29.78	1.59
	2022	1.05	7.32	14.76	5.83	8.08	0.50
Winter							
Well Drilling & Development	2021	2.40	22.47	20.17	0.05	1.31	1.05
Well Equipping & Mini-Park	2021	3.67	32.80	36.88	27.93	29.83	1.59
	2022	1.06	7.32	14.74	5.83	8.26	0.50
Maximum Daily Emissions		3.67	32.80	36.89	27.93	29.83	1.59
SCAQMD Regional Threshold		75	100	550	150	150	55
Threshold Exceeded?		No	No	No	No	No	No
Source: Appendix A							

Table AQ-3: Overall Operation Emissions Summary

	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Emissions from Pump	2.47	19.24	13.72	0.07	0.60	0.06
Emissions from Backup Generator	0.07	0.24	0.26	0.00	0.01	0.01
Total Max. Daily Emissions	2.54	19.48	13.98	0.07	0.61	0.07
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No
Source: Appendix A						

Significance Determination: Less than significant.

Mitigation Measures: No mitigation required.

Significance Determination After Mitigation: Less than significant.

c) The SCAQMD’s *Final Localized Significance Threshold Methodology* (SCAQMD 2008) recommends the evaluation of localized NO₂, CO, PM₁₀, and PM_{2.5} construction-related impacts to sensitive receptors in the immediate vicinity of the project site. Such an evaluation is referred to as a localized significance threshold (LST) analysis. SCAQMD has developed LSTs that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or

contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of NO_x, CO, PM₁₀, and PM_{2.5} pollutants for each of the 38 source receptor areas (SRAs) in the SCAB. The project site is located in SRA 17.

Sensitive receptors can include residences, schools, playgrounds, childcare centers, and athletic facilities. The nearest sensitive receptors are existing residences located adjacent to the project site. The distance between the project site boundary and the closest existing residential structure is approximately 25-feet. As such, a sensitive receptor distance of 25 meters, which is the closest distance provided by SCAQMD LST guidance.

Construction

The localized thresholds from the mass rate look-up tables in SCAQMD’s Final Localized Significance Threshold Methodology document were developed for use on projects that are less than or equal to 5 acres in size or have a disturbance of less than or equal to 5 acres daily. The project site is less than one acre; thus, LSTs for a 1-acre site were used as a screening tool to determine if a potentially significant impact could occur.

Table AQ-4 identifies the localized impacts at the nearest receptor location in the vicinity of the project. As shown, project construction-source emissions would not exceed the applicable SCAQMD LSTs for emissions of any criteria pollutant. Thus, implementation of the project would result in a less than significant localized air quality impact.

Table AQ-4: Localized Emissions from Construction

Construction Activity Modeled in CalEEMod	On-Site Emissions	Emissions (lbs/day)			
		NO _x	CO	PM ₁₀	PM _{2.5}
Well Equipping					
Demolition	Maximum Daily Emissions	17.80	12.23	3.11	1.20
	SCAQMD Localized Threshold	81	485	4	3
	Threshold Exceeded?	No	No	No	No
Site Preparation	Maximum Daily Emissions	8.25	5.96	0.41	0.36
	SCAQMD Localized Threshold	81	485	4	3
	Threshold Exceeded?	No	No	No	No
Trenching	Maximum Daily Emissions	32.80	27.93	1.52	1.43
	SCAQMD Localized Threshold	81	485	4	3
	Threshold Exceeded?	No	No	No	No
Building Construction	Maximum Daily Emissions	8.25	5.96	0.38	0.36
	SCAQMD Localized Threshold	81	485	4	3
	Threshold Exceeded?	No	No	No	No
Well Equipping & Mini-Park					
Demolition	Maximum Daily Emissions	17.80	12.23	3.11	1.20
	SCAQMD Localized Threshold	81	485	4	3
	Threshold Exceeded?	No	No	No	No
Site Preparation	Maximum Daily Emissions	8.25	5.96	0.41	0.36
	SCAQMD Localized Threshold	81	485	4	3
	Threshold Exceeded?	No	No	No	No
Trenching	Maximum Daily Emissions	32.80	27.93	1.52	1.43
	SCAQMD Localized Threshold	81	485	4	3

	Threshold Exceeded?	No	No	No	No
Building Construction	Maximum Daily Emissions	8.25	5.96	0.38	0.36
	SCAQMD Localized Threshold	81	485	4	3
	Threshold Exceeded?	No	No	No	No
Source: Appendix A					

As described previously, the proposed project would not significantly increase long-term emissions within the project area. Construction contractors would be required to implement measures to reduce or eliminate fugitive dust emissions by following SCAQMD’s standard construction practices (Rules 402 and 403, as included as PPP AQ-1 and PPP AQ-2). Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during construction, and impacts would be less than significant.

Operation

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). As previously discussed, the project would generate a minimal amount of traffic trips from on-going well maintenance and park maintenance, resulting in a negligible amount of new mobile source emissions.

As shown on Table AQ-5, operational emissions would not exceed the SCAQMD’s localized significance thresholds for any criteria pollutant at the nearest sensitive receptor. In addition, the passive mini-park is intended to be used by residents, students, and employees that are within walking distance of the site. The park is across the street from the transit center parking structure and may be used by commuters waiting for transit, or after transit and before work or school activities. The project does not include any parking; and therefore, does not provide for vehicle use. Therefore, localized air quality impacts from operational activities would be less than significant.

Table AQ-5: Localized Emissions from Operation

Operational Activity	Emissions (lbs/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	19.24	13.98	0.61	0.07
SCAQMD Localized Threshold	81	485	1	1
Threshold Exceeded?	No	No	No	No
Source: Appendix A				

Significance Determination: Less than significant.

Mitigation Measures: No mitigation required.

Significance Determination After Mitigation: Less than significant.

d) The proposed project would not emit other emissions, such as those generating objectionable odors, that would affect a substantial number of people. The threshold for odor is identified by SCAQMD Rule 402, Nuisance, which states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The SCAQMD lists land uses primarily associated with odor complaints as agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities.

The project would provide well equipment and a mini-park facility does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities. Standard construction requirements would minimize odor impacts from construction. Therefore, the construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction. It is expected that project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Thus, odors associated with the proposed project would be less than significant

Significance Determination: Less than significant.

Mitigation Measures: No mitigation required.

Significance Determination After Mitigation: Less than significant.

Existing Plans, Programs, or Policies

PPP AQ-1: Rule 402. The project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 402. The project shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

PPP AQ-2: Rule 403. The project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, which includes the following:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project are watered, with complete coverage of disturbed areas, at least 3 times daily during dry weather; preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and project site areas are reduced to 15 miles per hour or less.

PPP AQ-3: Rule 1113. The project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only "Low-Volatile Organic Compounds" paints

(no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used.

Sources:

Well 28 Air Quality Impact Analysis. Prepared by Urban Crossroads. (AQIA 2020).

4. BIOLOGICAL RESOURCES. <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Impact Analysis:

a) The project site is fully paved with asphalt and is located within an urbanized area. The project site does not contain any natural habitat. No endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS) occur on the site.

The proposed project would redevelop the project site with new well system and passive mini-park, which would include installation of new ornamental landscaping. As no sensitive species or habitats are located within the urban and developed site, implementation of the project would not result in a substantial adverse effect, either directly or through habitat modifications, on any sensitive species, and no impacts would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) Riparian habitats are those occurring along the banks of rivers and streams. Sensitive natural communities are natural communities that are considered rare in the region by regulatory agencies, known to provide habitat for sensitive animal or plant species, or known to be important wildlife corridors. As described above, the project site is developed and does not contain any natural habitats, including riparian. No riparian habitat or other sensitive natural communities occur adjacent to the project site. Additionally, the project site and adjacent areas are not included in any local or regional

plans, policies, and regulations that identify riparian habitat or other sensitive natural community. Therefore, no impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

c) Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as swamps, marshes, and bogs. As detailed previously, the project site is fully paved with asphalt; and it does not contain any wetlands. Therefore, the redevelopment of the project site would not result in impacts to wetlands.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

d) As previously discussed, the project site is fully paved with asphalt and surrounded by urban development. The project site does not contain any natural habitat, and no wildlife corridors or native wildlife nursery sites occur on the project site. Further, due to the urbanized nature of the project area, the potential for native resident or migratory wildlife species movement through the project area is negligible. Therefore, project implementation would not interfere substantially with use of native wildlife nursery sites and no impacts would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

e) The project site is fully paved with asphalt and does not contain any trees. However, trees are located in the adjacent right-of way. As part of the project, a tree in the right-of-way would be relocated for utility purposes. The City's participation in the Natural Community Conservation Planning (NCCP) program and the Tree Preservation Ordinance are the primary local measures to protect biological resources. The City's Tree Preservation Ordinance (Orange Municipal Code Chapter 12.32) prohibits the removal of trees, including historic trees, from undeveloped and public interest property without a permit. Based on a review of the City's Historic Trees Map, there are no historic trees near the project site. In addition, the project would be reviewed by the City's Public Works Department to ensure consistency with applicable street tree requirements in Municipal Code Chapter 12.28, Street Trees. Therefore, the proposed project would be consistent with the City's Tree Preservation Ordinance and Street Tree requirements, and impacts would not occur.

Significance Determination: Less than significant..

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant..

f) The City is a participant in the Orange County NCCP, which was approved in 1996. The project site is not identified as a reserve, non-reserve open space or special linkage in this NCCP. The project site does not fall within any other local or regional conservation plans. Therefore, no conflict with such plans is identified and no impacts would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

None.

Sources

United States Fish and Wildlife Service (USFWS). National Wetlands Inventory. Accessed:
<https://www.fws.gov/wetlands/data/mapper.html> (accessed July 16, 2020)

California's Department of Fish and Wildlife (CDFW) Species Explorer. Accessed:
<https://nrm.dfg.ca.gov/taxaquery/Default.aspx> (accessed July 16, 2020)

California's Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDDB). Accessed:
<https://wildlife.ca.gov/Data/CNDDDB> (accessed July 16, 2020)

5. CULTURAL RESOURCES. <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the Cultural and Paleontological Resources Assessment, prepared by Cogstone (CUL 2020), included as Appendix B, and the Geotechnical Exploration Report prepared by Tetra Tech, Inc. (GEO 2019), included as Appendix D.

The project site is located within the Old Towne Orange Historic District and the local Old Towne Orange Historic District.

National Register Old Towne Orange Historic District (NRHP)

The Old Towne Orange Historic District was listed in the National Register of Historic Places (NRHP) in 1997, and comprises a total of 1,237 contributing buildings, sites, and objects that are located in the area surrounding the original town plaza. The majority of the historic resources in the District were constructed between 1874 to 1940 and include over 50 architectural styles such as Victorian, Craftsman, American Bungalow, Classical Revival, Spanish Classical Revival, Mediterranean, and Prairie style.

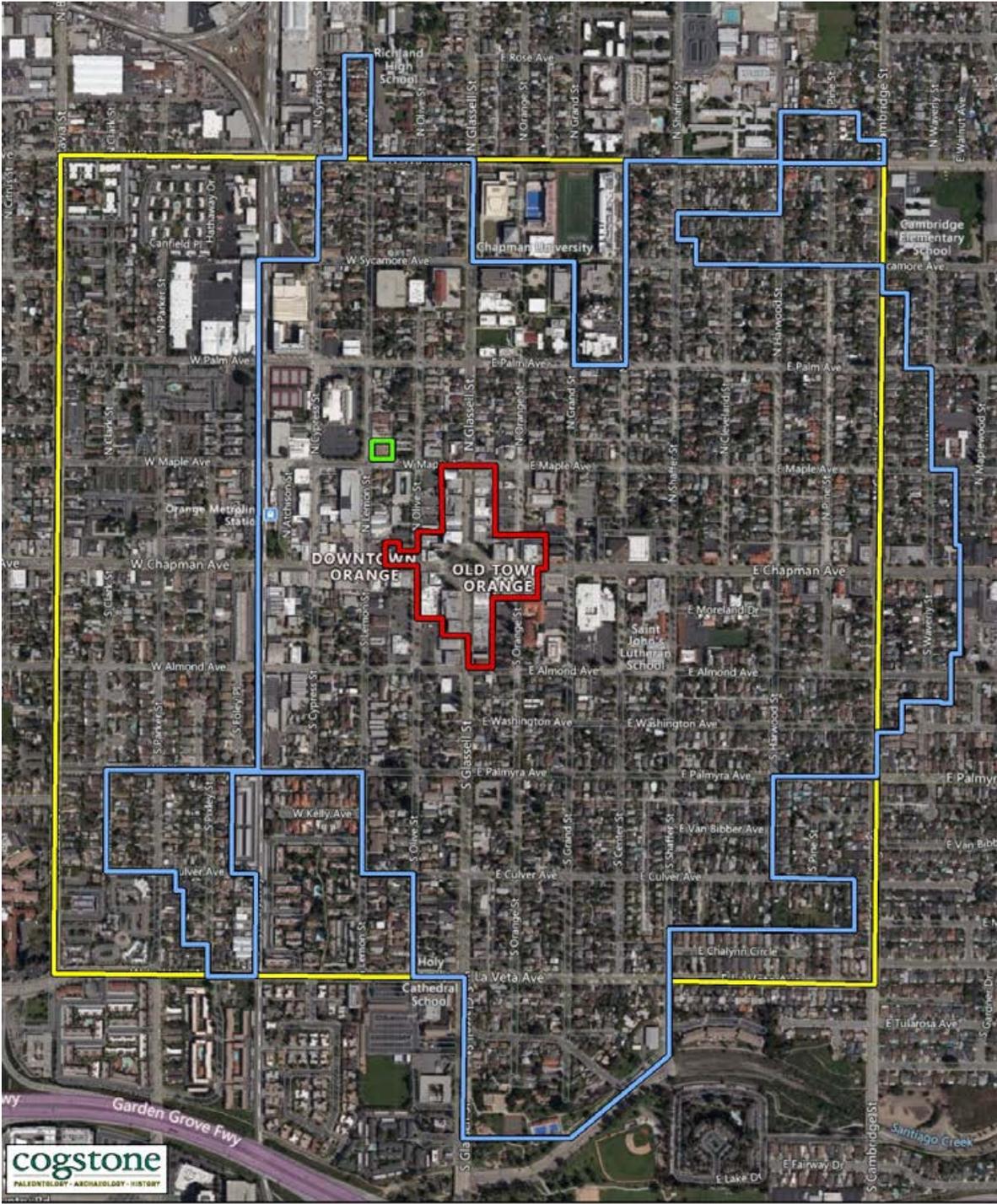
The District is listed in the NRHP under Criterion A for its association with Exploration/Settlement, Industry and Agriculture, and Transportation and Commerce. The District is also listed under Criterion C for architecture as it represents a large collection of residential, commercial, educational, civil, religious, government, and civic buildings which span from 1880 to 1940 and retain their integrity. The District is roughly bounded by Walnut Avenue to the north, Waverly Street to the east, W. O. Hart Park to the southeast, La Veta Avenue to the south, and to the east Clark Street and the Atchison, Topeka and Santa Fe Railroad (ATSF RR) track.

Character-defining features of the Old Towne Orange Historic District include commercial, industrial, and residential buildings one to two stories in height; largely rectangular building forms; brick, concrete, and wood materials; eclectic architectural styles of the late nineteenth through early twentieth century; grid-street pattern; zero to minimal building set-back on commercial and industrial properties; landscaped front and side-yard setbacks in the residential quadrants; and mature landscaping elements. Mid-ground or distant views are not a character-defining feature of the historic district, due to the dense concentration of buildings.

Local Old Towne Orange Historic District

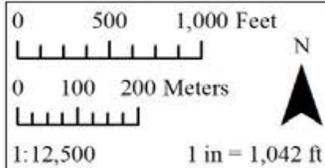
The Local Historic District boundaries that include properties on the periphery of the NRHP historic district in recognition of the fact that they are special areas of historic importance in Orange that warrant preservation at the local level. The local district contains 1,279 contributing resources and possesses the same character-defining features as the NRHP district. The boundaries of the Old Towne Orange Local Historic District expanded the boundaries of the National Register listed Old Towne Orange Historic District (see Figure 9, *Historic Districts*).

Historic Districts



Orange Well 28 Project
 City of Orange
 Orange County, CA

- Plaza Historic District (NRHP)
- Old Town Orange Historic District (NRHP)
- Old Town Orange Local Historic District
- Project Area



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The following buildings are located adjacent to the project and are considered significant historic resources listed as contributors to the Old Towne Orange Historic District (1D).

193 North Lemon Street. This site (APN: 039-173-01) is located to the south of the project site across Maple Avenue. Built in ca. 1905, the “Sherburn and Mary Miner House” is an example of Hip Roof Cottage style. It is a single-story box plan house with combination hip and gable roof and an enclosed front porch. The house is built on a box plan with ornamental cornices emerging from the center of the roof and has clapboard siding. A detached garage is located to the east of the main residence. This residence is listed as a contributor to the Old Towne Orange Historic District (1D). However, the overall historic setting and historic view shed of this residence has been negatively impacted by past development such as the Chapman University Dodge College building and parking lot and the Old Towne West Parking Structure.

204 North Olive Street. This site (APN: 039-162-11) is located adjacent to the east side of the project site. Built in 1905, the “William D. and Ella Granger House” is an example of Victorian style. It is a two-story, single-family residence with a steep-pitched, multi-gable roof, and clapboard siding (siding has been recently replaced with like materials). At the front façade (east façade) is a full-width and partial wraparound porch covered by a separate roof extension which includes a pedimented gable with ornamental shingles. A large three-part window is also located at the east facade. This residence is listed as a contributor to the Old Towne Orange Historic District (1D) and is on the local Mills Act list as of 1999. However, the overall historic setting and historic view shed of this residence has been impacted by previous development in the area and by the demolition of the residential and ancillary buildings that were previously on the project site.

214-218 North Olive Street. This site (APN: 039-162-12) is located adjacent to the east side of the project site. Built in 1923, the “Marx Apartments” is an example of a simple Mediterranean Revival style multi-family property. The property consists of two identical one-story buildings with rectangular footprints, flat roofs, and stucco facades. This property is listed as a contributor to Old Towne Orange Historic District (1D). Consistent with the setting of the other nearby historic properties, the overall setting and view shed of this residence has been impacted by previous development in the area and by the demolition of the residential and ancillary buildings that were previously on the project site.

233 North Lemon Street. This site (APN: 039-162-21) is located adjacent to the north of the project site and is developed with a one-story industrial building that was constructed in two phases, ca. 1914 and pre-1938. This Western Falsefront style building consists of two metal frame buildings joined as one (year not known) and clad in corrugated metal sheeting. This residence is listed as a contributor to Old Towne Orange Historic District (1D). Consistent with the setting of the other nearby historic properties, the overall historic setting and historic view shed of this site has been negatively impacted by past development such as the Chapman University Dodge College building and parking lot and the Old Towne West Parking Structure.

Impact Analysis:

a) According to the State CEQA Guidelines, a historical resource is defined as something that meets one or more of the following criteria:

- 1) Listed in, or determined eligible for listing in, the California Register of Historical Resources;
- 2) Listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k);

- 3) Identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or
- 4) Determined to be a historical resource by the project's Lead Agency.

As described previously, the project site is a paved parking lot and does not contain any structures. Therefore, the proposed project does not contain any structures that meet any of the historic resource criteria and does not meet the definition of an historical resource pursuant to CEQA. However, the project site is located within the Old Towne Orange Historic District that is listed in the National Register of Historic Places (NRHP) and is surrounded by historic structures to the north, south, and east of the site. Because the project involves the construction of a new structures within the boundaries of the Old Towne Orange Historic District, it constitutes the potential for a direct impact to the district. To protect the existing resources within the Old Towne Orange Historic District, the City has adopted specific design standards for new development or redevelopment projects. Projects found to be in conformance with the Old Towne Design Standards are generally considered to be in conformance with the Secretary of the Interior Standards for Treatment of Historic Properties (SOI Standards). Per SOI Standard regarding Standard for Rehabilitation, "New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired" (U.S. Department of the Interior 2017). The Old Towne Design Standards identified specific criteria for new construction that address compatibility with the historic district.

Table AES-1 in Section 1, Aesthetics provides a comparison of the proposed project and each of the Old Towne Design Standards. As shown in Table AES-1, the design is compatible with the historic materials, features, size, scale and proportion, and massing of the contributing resources of the historic district, especially historic industrial, commercial, and institutional buildings such as the Metrolink parking structure across the street. By limiting the height to 16-feet, the design is generally in keeping with the maximum height of the other buildings of the district (generally one to two stories). The massing and scale would be similar to buildings immediately surrounding the project area. The block of the project area is in a transitional area between the commercial core of the Plaza Historic District to the east and the industrial buildings of the Old Towne Orange Historic District flanking the railroad corridor to the west. As such, the scale and design of the well facility structure references historic industrial buildings while clearly differentiating itself from the historic buildings of the surrounding historic district and would not adversely impact the significance of the historic structures located adjacent to the project site. Therefore, impacts related to historic resource and the Old Towne Orange Historic District would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

b) The Cultural and Paleontological Resources Assessment includes a record search of the California Historic Resources Information System (CHRIS) from the South Central Coastal Information Center (SCCIC), which identified that no archaeological resources have been previously recorded within the project site (CUL 2020). In addition, the Geotechnical Exploration Report describes that the onsite soils consist of up to 3 feet of artificial fill overlying Quaternary-aged older alluvial fan deposits.

Construction of the well system would involve grading and excavation, which would involve disturbance of soils beyond the 3 feet of artificial fill. Because the site has previously been disturbed and includes

two to three feet of artificial fill, there is reduced potential for the project to impact prehistoric resources. However, buildings may have existed prior to modern-day trash services and well drilling would also encroach into the underlying Quaternary-aged older alluvial fan deposits. As such, undiscovered resources could exist on the project site. Therefore, Mitigation Measure CUL-1 has been included to provide procedures to be followed in the unlikely event that potential archaeological resources are discovered during grading, excavation, or other construction activities. Mitigation Measure CUL-1 requires that work in the vicinity of a find be halted until the find can be assessed for significance by a qualified archaeologist to determine the appropriate treatment and documentation of the discovery (California Code of Regulations [CCR], Title 14, Chapter 3, Section 15064.5(f). Mitigation Measure CUL-1 would reduce potential impacts to undiscovered archaeological resources to a less than significant level.

Significance Determination: Less than significant with mitigation incorporated.

Mitigation Measures:

CR-1: Archaeological Resources. Construction plans and specifications shall state that in the event that potential archaeological resources are discovered during excavation, grading, or construction activities, work shall cease within 50 feet of the find until a qualified archaeologist meeting the Secretary of Interior's Professional Qualifications for Archaeology as defined at 36 CFR Part 61, Appendix A has evaluated the find to determine whether the find constitutes a "unique archaeological resource," as defined in Section 21083.2(g) of the California Public Resources Code. Any resources identified shall be treated in accordance with California Public Resources Code Section 21083.2(g). If the resource is determined to be significant, 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. Prior to commencement of grading activities, the City of Orange Community Development Department shall verify that all project grading and construction plans include specific requirements regarding Public Resources Code Section 21083.2(g) and the treatment of archaeological resources as specified herein.

Significance Determination After Mitigation: Less than significant impact.

c) The project site has not been previously used as a cemetery. Thus, human remains are not anticipated to be uncovered during project construction. In addition, California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains. Specifically, California Health and Safety Code Section 7050.5 requires that if human remains are discovered, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of death, and made recommendations concerning the treatment and disposition of the human remains 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. If the coroner determines that the remains are not subject to his or her authority and if the coroner has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native

American Heritage Commission. Compliance with existing law would ensure that significant impacts to human remains would not occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

PPP CUL-1: Human Remains. In the event that human remains are encountered on the project site, work within 50 ft of the discovery shall cease and the County Coroner shall be notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. Prior to the issuance of grading permits, the City Community and Planning, Building, and Code Enforcement Department Director, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

Sources

Cultural and Paleontological Resources Assessment, September 2020. Prepared by Cogstone (Appendix B)

6. ENERGY. <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Well 28 Energy Tables, prepared by Urban Crossroads (UC 2020), included as Appendix C.

Impact Analysis:

a) Electricity to the project area is provided by Southern California Edison (SCE). The project includes installation of a new SCE transformer to power the well facilities. In addition, a backup generator that would run off fuel would be installed to be used in the event of an electrical outage.

Construction

During project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and well drilling and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment, construction worker travel to and from the project site, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities).

Based on these uses of energy during construction activities, the proposed project and associated infrastructure would not be expected to result in demand for fuel greater on a per-unit-of-development basis than other development projects in Southern California. Construction does not involve any unusual or increased need for energy. In addition, the extent of construction activities that would occur is limited to an approximately 1.5 year period, and the demand for construction-related electricity and fuels would be limited to that time frame.

Construction contractors are required to demonstrate compliance with applicable California Air Resources Board (CARB) regulations governing the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment as part of the City’s construction permitting process. In addition, compliance with existing CARB idling restrictions would reduce fuel combustion and energy consumption.

As shown on Table E-1, a total of approximately 5,438 kWh of electricity is anticipated to be consumed during project construction. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption.

Table E-1: Project Construction Energy Usage

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
Proposed Project	\$0.08	5,436
Total Project Construction Electricity Usage (kWh)		5,436

Source: Appendix C

The petroleum-based fuel use summary provided on Table E-2 below represents a portion of the transportation energy that would be consumed during project consumption. As shown, on- and off-road vehicles would consume an estimated 55,379 gallons of diesel fuel throughout the project's construction.

Table E-2: Estimated Construction Equipment Fuel Consumption (1 of 2)

Construction Activity	Duration	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Well Drilling & Development								
Site Preparation	9	Cranes	231	1	8	0.29	536	261
		Tractors/Loaders/Backhoes	97	1	8	0.37	287	140
		Welders	46	1	8	0.45	166	81
Trenching	40	Bore/Drill Rigs	221	1	8	0.50	884	1,911
		Cranes	231	1	8	0.29	536	1,159
		Generator Sets	84	1	8	0.74	497	1,075
		Pumps	84	2	8	0.74	995	2,150
		Tractors/Loaders/Backhoes	97	1	8	0.37	287	621
		Welders	46	1	8	0.45	166	358
Building Construction	10	Cranes	231	1	8	0.29	536	290
		Tractors/Loaders/Backhoes	97	1	8	0.37	287	155
		Welders	46	1	8	0.45	166	90

Table E-2: Estimated Construction Equipment Fuel Consumption (2 of 2)

Construction Activity	Duration	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Well Equipping								
Demolition	3	Concrete/Industrial Saws	81	1	8	0.73	473	77
		Rubber Tired Dozers	247	1	8	0.40	790	128
		Tractors/Loaders/Backhoes	97	2	8	0.37	574	93
Site Preparation	15	Cranes	231	1	8	0.29	536	435
		Tractors/Loaders/Backhoes	97	1	8	0.37	287	233
		Welders	46	1	8	0.45	166	134
Trenching	145	Cranes	231	1	8	0.29	536	4,200
		Generator Sets	84	1	8	0.74	497	3,898
		Off-Highway Trucks	402	2	8	0.38	2,444	19,157
		Other Construction Equipment	172	1	8	0.42	578	4,530
		Pavers	130	1	8	0.42	437	3,424
		Plate Compactors	8	1	8	0.43	28	216
		Pumps	84	1	8	0.74	497	3,898
		Rollers	80	1	8	0.38	243	1,906
Building Construction	47	Tractors/Loaders/Backhoes	97	1	8	0.37	287	2,250
		Cranes	231	1	8	0.29	536	1,362
		Tractors/Loaders/Backhoes	97	1	8	0.37	287	729
		Welders	46	1	8	0.45	166	421
Total Construction Fuel Demand (Gallons Diesel Fuel)								55,379

Source: Appendix C

Tables E-3 through E-5 show that construction workers would use approximately 1,799 gallons of gasoline fuel to travel to and from the project site.

Table E-3: Construction Worker Fuel Consumption Estimate (LDA)

Construction Activity	Construction Activity Modeled in CalEEMod	Duration	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2021							
Well Drilling & Development	Site Preparation	9	4	14.7	529	31.62	17
	Trenching	40	9	14.7	5,292	31.62	167
	Building Construction	10	4	14.7	588	31.62	19
Well Equipping & Mini-Park	Demolition	3	5	14.7	221	31.62	7
	Site Preparation	15	4	14.7	882	31.62	28
	Trenching	145	4	14.7	8,526	31.62	270
2022							
Well Equipping & Mini-Park	Building Construction	47	13	14.7	8,982	32.59	276
Total Construction Worker (LDA) Fuel Consumption							783

Source: Appendix C

Table E-4: Construction Worker Fuel Consumption Estimate (LDT1)

Construction Activity	Construction Activity Modeled in CalEEMod	Duration	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2021							
Well Drilling & Development	Site Preparation	9	2	14.7	265	26.77	10
	Trenching	40	5	14.7	2,940	26.77	110
	Building Construction	10	2	14.7	294	26.77	11
Well Equipping & Mini-Park	Demolition	3	3	14.7	132	26.77	5
	Site Preparation	15	2	14.7	441	26.77	16
	Trenching	145	2	14.7	4,263	26.77	159
2022							
Well Equipping & Mini-Park	Building Construction	47	7	14.7	4,836	27.49	176
Total Construction Worker (LDT1) Fuel Consumption							487

Source: Appendix C

Table E-5: Construction Worker Fuel Consumption Estimates (LDT2)

Construction Activity	Construction Activity Modeled in CalEEMod	Duration	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2021							
Well Drilling & Development	Site Preparation	9	2	14.7	265	24.58	11
	Trenching	40	5	14.7	2,940	24.58	120
	Building Construction	10	2	14.7	294	24.58	12
Well Equipping & Mini-Park	Demolition	3	3	14.7	132	24.58	5
	Site Preparation	15	2	14.7	441	24.58	18
	Trenching	145	2	14.7	4,263	24.58	173
2022							
Well Equipping & Mini-Park	Building Construction	47	7	14.7	4,836	27.49	176
Total Construction Worker (LDT2) Fuel Consumption							529

Source: Appendix C

In addition, Tables E-6 through E-8 show that construction haul trucks and vendor trucks would use approximately 33,538 gallons of diesel fuel to travel to and from the project site.

Table E-6: Construction Vendor Fuel Consumption Estimates (MHDT)

Construction Activity	Construction Activity Modeled in CalEEMod	Duration	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2021							
Well Drilling & Development	Site Preparation	9	5	6.9	311	8.74	36
	Trenching	40	7	6.9	1,932	8.74	221
	Building Construction	10	5	6.9	345	8.74	39
Well Equipping & Mini-Park	Demolition	3	0	6.9	0	8.74	0
	Site Preparation	15	5	6.9	518	8.74	59
	Trenching	145	41	6.9	41,021	8.74	4,694
2022							
Well Equipping & Mini-Park	Building Construction	47	22	6.9	7,135	9.03	790
Total Construction Vendor (MHDT) Fuel Consumption							5,839

Source: Appendix C

Table E-7: Construction Vendor Fuel Consumption Estimates (HHDT)

Construction Activity	Construction Activity Modeled in CalEEMod	Duration	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2021							
Well Drilling & Development	Site Preparation	9	5	6.9	311	6.20	50
	Trenching	40	7	6.9	1,932	6.20	311
	Building Construction	10	5	6.9	345	6.20	56
Well Equipping & Mini-Park	Demolition	3	0	6.9	0	6.20	0
	Site Preparation	15	5	6.9	518	6.20	83
	Trenching	145	41	6.9	41,021	6.20	6,611
2022							
Well Equipping & Mini-Park	Building Construction	47	22	6.9	7,135	6.37	1,120
Total Construction Vendor (HHDT) Fuel Consumption							8,231

Source: Appendix C

Table E-8: Construction Hauling Fuel Consumption Estimates (HHDT)

Construction Activity	Construction Activity Modeled in CalEEMod	Duration	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2021							
Well Drilling & Development	Trenching	40	40	20	32,000	6.20	5,157
Well Equipping & Mini-Park	Demolition	3	30	20	1,800	6.20	290
	Trenching	145	30	20	87,000	6.20	14,021
Total Construction Hauling (HHDT) Fuel Consumption							19,468

Source: Appendix C

Because project construction activities would comply with all existing regulations, as ensured through the City’s permitting process, it would not use fuel in a wasteful, inefficient, and unnecessary manner. Thus, impacts related to construction energy usage would be less than significant.

Operation

The proposed well system and passive mini-park would rely on electricity from the grid for the majority of operations. It is likely that operations would at some point include use of a backup generator that would run on a petroleum-based product. However, ongoing use of the backup generator would not occur. Overall, annual operational energy demand from the project would be 4,032,155 kWh/year, as demonstrated in Table E-9 below. Furthermore, the project would adhere to the current California Building Energy Efficiency Standards.

Table E-9: Project Annual Operational Demand Summary

Electricity Demand	kWh/year
Pump	4,032,155
Total Project Electricity Demand	4,032,155

Source: Appendix C

Overall, the 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 standards, included herein as PPP E-1, require numerous energy efficiency measures to be incorporated into proposed structures, including enhanced insulation, use of energy efficient lighting and appliances as well as a variety of other energy-efficiency measures to be incorporated into all of the proposed structures. Therefore, the proposed project would be designed and built to minimize electricity use and that existing and planned electricity capacity and electricity supplies would be sufficient to support the project’s electricity demand. Thus, impacts with regard to electrical supply and infrastructure capacity would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

b) As demonstrated above in Response 6(a), construction of the project would increase demand for electricity, gasoline fuel, and diesel fuel. In addition, operation of the project would increase demand for electricity. However, the project would comply with all local and state plans for renewable energy and energy efficiency, including the California Building Energy Code, as listed below in PPP E-1. The City’s administration of these requirements includes review of design components and energy conservation measures during the permitting process, which ensures that all requirements are met. In addition, the project would not conflict with or obstruct opportunities to use renewable energy, such as solar energy. As such, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would not occur.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

Existing Plans, Programs, or Policies

PPP E-1. Title 24 CalGreen Compliance: The project is required to comply with the CalGreen Building Code as included in the City’s Municipal Code Section 15.17.010 to ensure efficient use of energy. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.

Sources

Well 28 Energy Tables. Prepared by Urban Crossroads. Appendix C.

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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Geotechnical Exploration Report prepared by Tetra Tech, Inc. (GEO 2019), included as Appendix D and the Cultural and Paleontological Resources Assessment (CUL 2020), included as Appendix B.

Impact Analysis:

a) i) The project site is not located within a designated Alquist-Priolo Earthquake Fault Zone. As described by the Geotechnical Exploration Report prepared for the proposed project, there are no known active faults traversing the site. The known regional faults that could produce the most significant ground shaking at the project site include the San Joaquin Hills Blind Thrust and Whittier faults located approximately 6.9 miles and 8.8 miles, respectively, from the site (GEO 2019). Thus, the proposed project would not expose people or structures to potential substantial adverse effects from rupture of a known earthquake fault that is delineated on an Alquist-Priolo Earthquake Fault Zoning Map, and impacts would not occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

a) ii) The project site is located within a seismically active region of Southern California. As mentioned previously, the known regional faults that could produce the most significant ground shaking at the project site include the San Joaquin Hills Blind Thrust and Whittier faults located approximately 6.9 miles and 8.8 miles, respectively, from the site (GEO 2019). Thus, moderate to strong ground shaking

can be expected at the site. The amount of motion can vary depending upon the distance to the fault, the magnitude of the earthquake, and the local geology.

Structures built in the City are required to be built in compliance with the California Building Code (CBC [California Code of Regulations, Title 24, Part 2]), included in the Municipal Code as Chapter 15.04. In addition, PPP GEO-1 has been included to provide provisions for earthquake safety based on factors including occupancy type, the types of soils onsite, and the probable strength of the ground motion. Compliance with the CBC would include the incorporation of: 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structures so that it would withstand the effects of strong ground shaking. Because the proposed project would be constructed in compliance with the CBC, the proposed project would result in a less than significant impact related to strong seismic ground shaking.

Significance Determination: Less than significant.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant.

a) iii) Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: 1) shallow groundwater; 2) low density, fine, clean sandy soils; and 3) strong ground motion. Effects of liquefaction can include sand boils, settlement, and bearing capacity failures below structural foundations.

Soils that are most susceptible to liquefaction are clean, loose, saturated, and uniformly graded fine-grained sands that lie below the groundwater table within approximately 50 feet below ground surface. Lateral spreading is a form of seismic ground failure due to liquefaction in a subsurface layer.

According to the Geotechnical Exploration Report prepared for the proposed project, a review of the *Seismic Hazard Zone Map for the Orange Quadrangle* (CGS 1998) indicates that the subject site is not located within an area that has been identified by the State of California as being potentially susceptible to the occurrence of liquefaction. Additionally, due to the presence of dense to very dense sandy soils and a relatively deep historically high groundwater of 40 feet below grade, the liquefaction potential at the site is very low (GEO 2019).

Furthermore, structures built in the City are required to be built in compliance with the CBC, as included in the City's Municipal Code as Chapter 15.04 (and herein as PPP GEO-1), which implements specific requirements for seismic safety, excavation, foundations, retaining walls and site demolition. Compliance with the CBC, as included as PPP GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects of seismic ground movement, including liquefaction and settlement. Compliance with the requirements of the CBC and City's Municipal Code for structural safety, included as PPP GEO-1, would reduce hazards from seismic-related ground failure, including liquefaction and settlement to a less than significant level.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

a) iv) Landslides and other slope failures are secondary seismic effects that are common during or soon after earthquakes. Areas that are most susceptible to earthquakes induced landslides are steep slopes underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits.

As described above, the project site is located in a seismically active region subject to strong ground shaking. However, the project site is flat and does not contain any hills or any other areas that could be subject to landslides. In addition, the site is located in a flat and developed area. Therefore, the project would not cause potential substantial adverse effects related to slope instability or seismically induced landslides.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) Construction of the project has the potential to contribute to soil erosion and the loss of topsoil. Grading and excavation activities that would be required for the proposed project would expose and loosen topsoil, which could be eroded by wind or water.

The City's Municipal Code Section 7.01.020 implements the requirements of the Orange County Municipal NDPES Storm Water Permit and all projects in the City are required to conform to the permit requirements. This includes installation of Best Management Practices (BMPs) in compliance with the NPDES permit, which establishes minimum stormwater management requirements and controls that are required to be implemented for the proposed project. As described in Section 10, *Hydrology and Water Quality*, the proposed project includes installation of landscaping, which would also reduce potential impacts related to substantial soil erosion. As a result, potential impacts related to substantial soil erosion or loss of topsoil would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) As described above, the project site is flat, and does not contain nor is adjacent to any slope or hillside area. The project would not create slopes. Thus, on or off-site landslides would not occur from implementation of the project.

Lateral spreading, a phenomenon associated with seismically induced soil liquefaction, is a display of lateral displacement of soils due to inertial motion and lack of lateral support during or post liquefaction. It is typically exemplified by the formation of vertical cracks on the surface of liquefied soils, and usually takes place on gently sloping ground or level ground with nearby free surface such as drainage or stream channel. Due to the presence of dense to very dense sandy soils and a relatively deep historically high groundwater of 40 feet below grade, the potential for lateral spreading is considered low (GEO 2019). Also, as described previously, compliance with the CBC, as included as PPP GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects of related to ground movement, including lateral spreading. Thus, impacts would be less than significant.

Differential settlement or subsidence could occur if buildings or other improvements are built on low-strength foundation materials (including imported fill) or if improvements straddle the boundary between

different types of subsurface materials (e.g., a boundary between native material and fill). Although differential settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause building damage over time. Soils susceptible to seismically induced settlement typically include dry loose sands. The Geotechnical Exploration Report performed analyses to calculate the potential earthquake-induced settlement at the site, which determined that differential settlement is estimated to be approximately one-half of the total settlement. The report further recommends that foundation for the proposed structures should be underlain by compacted fill to provide a uniform support and reduce potential for differential settlement (GEO 2019). Thus, with compliance with the CBC, included as PPP GEO-1, and compliance with the recommendations of the Geotechnical Exploration Report, potential impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

d) Expansive soils contain certain types of clay minerals that shrink or swell as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas with seasonal changes of soil moisture experiences, such as southern California, have a higher potential of expansive soils than areas with higher rainfall and more constant soil moisture.

According to the Geotechnical Exploration Report prepared for the proposed project, subsurface soils consist of clayey sand and sandy clay up to 10 feet in depth, which are underlain by very dense sand and gravel that are not expansive (GEO 2019). However, as described previously, compliance with the CBC, as included as PPP GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects of related to ground movement, including expansive soils. Engineering design recommendations would be reviewed and approved by the City's Building Official or designee prior to issuance of building permits. Thus, impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

e) The project would not use septic tanks or alternative methods for disposal of wastewater into subsurface soils. The proposed project would connect to existing public wastewater infrastructure. Therefore, the project would not result in any impacts related to septic tanks or alternative wastewater disposal methods.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

f) As described in the Cultural and Paleontological Resources Assessment (CUL 2020), the project site is mapped entirely as having middle to late Pleistocene older alluvial fans. The paleontological record search revealed no fossil localities within the project site or a 2.5-mile radius of the site. However, two localities were identified within similar deposits between 2.5 and 3.5 miles and another 13 localities were found between 3.5 and 10 miles from the site. These resources include extinct late Pleistocene animal fossils of ground sloth, sabre-toothed cat, mammoth, horse, tapir, camel, and bison. These resources were all found more than eight feet below the ground surface.

Thus, the Cultural and Paleontological Resources Assessment determined that the middle to late Pleistocene older alluvial fan sediments less than eight feet below the ground surface have a low potential for fossils. However, sediments that are more than eight feet below the ground surface have a moderate potential for fossils.

Drilling of the proposed well would extend to depths of 1,000 feet below the ground surface. While Pleistocene and older potentially fossil bearing deposits would be encountered during these excavations, borings, drilling, pot-holing, and similar activities have a low potential to produce paleontological resources (CUL 2020). Due to the low potential of impact to fossils, Mitigation Measure PAL-1 has been included to require ground-disturbing activity to cease should a potential paleontological resource be uncovered during project excavation, well drilling, or grading activities until evaluated by a paleontologist. With implementation of Mitigation Measure PAL-1, impacts to paleontological resources would be less than significant.

Significance Determination: Less than significant with mitigation incorporated.

Mitigation Measures:

Mitigation Measure PAL-1: Paleontological Resources. Construction plans and specifications shall state that in the event that potential paleontological resources are encountered, ground-disturbing activity within 25 feet of the area of the discovery shall cease until a qualified paleontologist can evaluate the find. The paleontologist shall examine the materials encountered, assess the nature and extent of the find, and recommend a course of action to further investigate and protect or recover and salvage those resources that have been encountered.

Criteria for discard of specific fossil specimens will be made explicit. If a qualified paleontologist determines that impacts to a sample containing significant paleontological resources cannot be avoided by project planning, then recovery may be applied. Actions may include recovering a sample of the fossiliferous material prior to construction, monitoring work and halting construction if an important fossil needs to be recovered, and/or cleaning, identifying, and cataloging specimens for curation and research purposes. All recovered and salvaged resources shall be prepared to the point of identification and permanent preservation by the paleontologist. Resources shall be identified and curated into an established accredited professional repository. The paleontologist shall have a repository agreement in hand prior to initiating recovery of the resource. 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 After Mitigation: Less than significant impact.

Existing Plans, Programs, or Policies

PPP GEO-1: California Building Code. Prior to issuance of any construction permits, the project is required to demonstrate compliance with the California Building Code as included in the City's Municipal Code Chapter 15.04 to preclude significant adverse effects associated with seismic hazards. California Building Code related and geologist and/or civil engineer specifications for the project are required to be incorporated into grading plans and specifications as a condition of construction permit approval.

Sources

Geotechnical Exploration Report, City of Orange Well No. 28 Project, 235 West Maple Avenue, City of Orange, California. August 23, 2019. Tetra Tech, Inc.

Orange County General Plan, Chapter VI-113 Paleontology (General Areas of Sensitivity) (Figure VI-9). Amended 2012. Accessed: <https://www.ocgov.com/civicax/filebank/blobdload.aspx?blobid=8621>

8. GREENHOUSE GAS EMISSIONS. <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the Well 28 Greenhouse Gas Analysis, Prepared by Urban Crossroads (GHG 2020), included as Appendix E.

GHG Thresholds

The City of Orange has not adopted a numerical significance threshold to evaluate greenhouse gas (GHG) impacts. However, the City has an adopted *Guidance for Greenhouse Gas Emissions Analysis* (Memo) that provides direction for evaluating GHG emissions analyses in CEQA documents. The Memo states that the City utilizes the Tier 3 quantitative thresholds recommended in the SCAQMD’s Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans (SCAQMD Interim Threshold).

The SCAQMD Tier 3 quantitative thresholds consists of screening values to determine if GHG emissions are potentially significant. A project’s construction emissions are averaged over 30 years and are added to the project’s operational emissions. If a project’s emissions are below one of the following screening thresholds, then the project is less than significant:

- o Residential and Commercial land use: 3,000 MTCO₂e per year
- o Industrial land use: 10,000 MTCO₂e per year
- o Based on land use type: residential: 3,500 MTCO₂e per year; commercial: 1,400 MTCO₂e per year; or mixed use: 3,000 MTCO₂e per year

The SCAQMD’s draft threshold uses the Executive Order S-3-05 year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order’s objective would contribute to worldwide efforts to cap CO₂ concentrations at 450 ppm, thus stabilizing global climate. Therefore, for purposes of examining potential GHG impacts from implementation of the proposed project, and to provide a conservative analysis of potential impacts, the Tier 3 screening level for all land use projects of 3,000 MTCO₂e was selected as the significance threshold (GHG 2020).

Impact Analysis:

a) Construction activities produce GHG emissions from various sources, such as site excavation, grading, utility engines, heavy-duty construction vehicles onsite, equipment hauling materials to and from the site, asphalt paving, building construction with, and motor vehicles transporting the construction crew. The most insensate phase of construction, Phase 2, is anticipated to generate 80 daily trips, with 8 trips during the AM peak hour and 8 trips during the PM peak hour.

Operation of the proposed well facility would result in GHG emissions from the occasional vehicle trip for maintenance, electricity usage, petroleum consumption during the potential occasional usage of a backup generator, and water transport (the energy required to pump water). Water produced from the proposed well would be disinfected using sodium hydrochloride before being discharged to an off-site location. The electricity used for pumping of the groundwater, and the application of sodium

hydrochloride, would be generated off-site, and would therefore be classified as indirect emissions in the form of GHGs. In addition, the passive mini-park is intended to be used by residents, students, and employees that are within walking distance of the site. The park is across the street from the transit center parking structure and may be used by commuters waiting for transit, or after transit and before work or school activities. The project does not include any parking; and therefore, does not provide for vehicle use.

The estimated operational GHG emissions that would be generated from implementation of the proposed project were determined using the California Emissions Estimator Model (CalEEMod Version 2016.3.2), as detailed in Appendix E, and shown in Table GHG-1. Additionally, in accordance with SCAQMD recommendations, the project’s amortized construction related GHG emissions were added to the operational emissions estimate in order to determine the project’s total annual GHG emissions.

Table GHG-1: Project GHG Emissions

Emission Source	Emissions (MT/yr)			
	CO2	CH4	N2O	Total CO2e
Annual construction-related emissions amortized over 30 years	22.19	0.00	0.00	22.31
Emissions from Pump	1,289.38	0.03	0.00	1,290.29
Emissions from Backup Generator	6.09	0.00	0.00	6.11
Total CO2e (All Sources)	1,318.71			

Source: Appendix E

As shown on Table GHG-1, the project would result in approximately 1,318.71 MTCO_{2e} per year, which would be below the screening threshold of 3,000 MTCO_{2e} per year. The occasional weekly maintenance trips that would be generated during mini-park and well operations would be far less intense than the 80 daily trips generated by the most intense construction phase (Phase 2). As a result, generate negligible operational mobile source GHG emissions. Therefore, impacts related to GHG emissions would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

b) The proposed project would redevelop the site with a well system and passive mini-park. As discussed in the previous response, the project’s GHG emissions are below SCAQMD’s 3,000 MTCO_{2e} threshold. Implementation of the proposed project would provide additional water supply infrastructure within an already served area and a mini-park that is designed for pedestrian access. This would not conflict with existing plans, policies, and regulations adopted for the purpose of reducing the emissions of greenhouse gas.

In addition, in 2017 the California Air Resources Board (CARB) released the *Final 2017 Scoping Plan Update*, which reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed 2017 Update builds upon include the Cap-and-Trade Regulation, cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH₄ emissions from agricultural and other wastes. Table GHG-2 summarizes the project’s consistency with the 2017 Scoping Plan. As summarized, the project would not conflict

with any of the provisions of the Scoping Plan. Therefore, the proposed project would not conflict with existing plans, policies, and regulations adopted for the purpose of reducing the emissions of greenhouse gas.

Table GHG-2: Project Consistency with 2017 Scoping Plan

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50% of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	Consistent. The project would use energy from Southern California Edison (SCE). SCE has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources. The project would not interfere with or obstruct SCE energy source diversification efforts.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. The project would be designed and constructed to implement the energy efficiency measures for new industrial developments and would include several measures designed to reduce energy consumption. The project would not interfere with or obstruct policies or strategies to establish annual targets for statewide energy efficiency savings and demand reduction.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		Consistent. The proposed project would be designed and constructed to implement the energy efficiency measures, where applicable by including several measures designed to reduce energy consumption. The proposed project includes energy efficient lighting and fixtures that meet the current Title 24 Standards.
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plug-in hybrid light-duty EVs by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	Consistent. This is a CARB Mobile Source Strategy. The project provides for well infrastructure and a mini-park that does not contain parking. The project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty electric vehicle 2025 targets.
At least 4.2 million zero emission and plug-in hybrid light-duty EVs by 2030.		Consistent. This is a CARB Mobile Source Strategy. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty electric vehicle 2030 targets.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Consistent. This is a CARB Mobile Source Strategy. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere with CARB efforts to

Action	Responsible Parties	Consistency
		further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.
Medium- and Heavy-Duty GHG Phase 2.		Consistent. This is a CARB Mobile Source Strategy. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere with CARB efforts to implement Medium- and Heavy-Duty GHG Phase 2 standards.
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20% of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100% of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO _x standard.		Consistent. This is a CARB Mobile Source Strategy. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere with CARB efforts improve transit-source emissions.
Last Mile Delivery: New regulation that would result in the use of low NO _x or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5% of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10% in 2025 and remaining flat through 2030.		Consistent. This is a CARB Mobile Source Strategy. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere with CARB efforts to improve last mile delivery emissions.
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document “Potential VMT Reduction Strategies for Discussion.”		Consistent. This is a CARB VMT Reduction Strategy. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere with CARB efforts to implement VMT reduction strategies articulated under SB 374 and the Sustainable Communities Strategies.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	Consistent. This is a CARB Mobile Source Strategy. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere with CARB efforts to Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).

Action	Responsible Parties	Consistency
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor’s Office of Business and Economic Development (GO- Biz), California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	Consistent. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere with agency efforts to harmonize transportation facility project performance with emissions reductions and increase competitiveness of transit and active transportation modes.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC, CARB	Consistent. The project would not obstruct or interfere with agency efforts to develop pricing policies to support low-GHG transportation.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	Consistent. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The Project would not obstruct or interfere with agency efforts to improve freight system efficiency.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		Consistent. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere with agency efforts to deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.	CARB	Consistent. When adopted, this measure would apply to all fuel purchased and used in the state. The project would not obstruct or interfere with agency efforts to adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.
Implement the Short-Lived Climate Pollutant Strategy (SLPS) by 2030		

Action	Responsible Parties	Consistency
40% reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, California State Water Resource Control Board (SWRCB), Local Air Districts	Consistent. The project would be required to comply with this measure and reduce any project-source SLPS emissions accordingly. The project would not obstruct or interfere agency efforts to reduce SLPS emissions.
50% reduction in black carbon emissions below 2013 levels.		
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	Consistent. The project would implement waste reduction and recycling measures consistent with State and City requirements. The project would not obstruct or interfere agency efforts to support organic waste landfill reduction goals in the SLCP and SB 1383.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	Consistent. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere agency efforts to implement the post-2020 Cap-and-Trade Program.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	Consistent. The project site is developed and within a developed area. The project would not obstruct or interfere agency efforts to protect land from conversion through conservation easements and other incentives.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity		Consistent. The project site is vacant disturbed property that consists of a fenced asphalt parking lot. The site does not comprise an area that would effectively provide for carbon sequestration. The project would install new trees and landscaping that would enhance the carbon sequestration capacity of the site. The project would not obstruct or interfere agency efforts to increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		Consistent. Where appropriate, the project incorporates wood or wood products. The project would not obstruct or interfere agency efforts to encourage use of wood and agricultural products to increase the amount of carbon stored in the natural and built environments.
Establish scenario projections to serve as the foundation for the Implementation Plan		Consistent. The project would not obstruct or interfere agency efforts to establish scenario

Action	Responsible Parties	Consistency
		projections to serve as the foundation for the implementation Plan.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	Consistent. The project provides for well infrastructure and a mini-park that does not contain parking facilities. The project would not obstruct or interfere agency efforts to establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018.
Implement Forest Carbon Plan	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	Consistent. The project would not obstruct or interfere agency efforts to implement the Forest Carbon Plan.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	Consistent. The project would not obstruct or interfere agency efforts to identify and expand funding and financing mechanisms to support GHG reductions across all sectors.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

PPP E-1: CalGreen Compliance. As listed previously in Section 6, *Energy*.

Sources

Well 28 Greenhouse Gas Analysis. Prepared by Urban Crossroads. Appendix E.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the Phase I Environmental Site Assessment, prepared by Hillman Consulting LLC (Phase I 2020), included as Appendix F.

Impact Analysis:

a) A hazardous material is defined as any material that, due to its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that regulatory agencies have a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the home, workplace, or environment. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment.

Construction

The short-term construction process for the proposed project would involve limited routine transport, use, and disposal of hazardous materials. Fuels and solvents for construction would be stored and utilized pursuant to existing regulatory requirements. The use, storage, transport, and disposal of hazardous materials for construction of the facility would be carried out accordance with federal and state regulations. No extremely hazardous substances (such as those governed under Title 40, Part 335 of the Code of Federal Regulations) would be used, stored, transported, or disposed of during project construction. Construction specifications prepared for the proposed project would identify best management practices (BMPs) to ensure the lawful transport, use, storage, and disposal of hazardous materials. Thus, impacts related to construction would be less than significant.

Operation

Operation of the proposed well would require limited transport, storage, use, and disposal of hazardous materials. The project would involve the use of sodium hypochlorite for disinfection, which would be contained in a double walled safety tank. In addition, the chemical storage area would be covered for protection.

All chemical storage and usage would comply with existing federal, State, and local requirements, including chemical hygiene requirements administered by the California Division of Occupational Safety and Health. During filling of storage tanks, maintenance personnel would be present to guard against spillage. In addition, containment facilities would also be available in the event of a spill. These methods are currently in place at other well facilities in the City.

The project would also construct a passive mini-park, which would involve routinely using hazardous materials including pesticides and fertilizers. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these hazardous materials products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the project.

Further, all spent hazardous materials would be disposed of in accordance with California Department of Toxic Substances Control (DTSC) regulations. Therefore, operation of the project would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste, and impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

b) The project would not create a significant hazard to the public or the environment through a reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Construction

During construction, there is a potential for accidental release of hazardous substances, such as petroleum-based fuels or hydraulic fluid used by construction equipment. As described in the previous response, hazardous materials used during construction of the project would be done in compliance with federal and State regulations that limit potential risks related to upset and accident conditions. In addition, no extremely hazardous substances would be used, stored, transported, or disposed of during project construction. Thus, impacts related to the release of hazardous materials during construction would be less than significant.

Operation

As described in the previous response, all chemical storage and usage would comply with existing federal, State, and local requirements, including chemical hygiene requirements administered by the California Division of Occupational Safety and Health. During filling of storage tanks, personnel would be present to guard against spillage. In addition, containment facilities would also be available in the event of a spill. The new well facilities would be operated consistent with other existing facilities in the City. The project would also construct a passive mini-park, which would involve routinely using hazardous materials including pesticides and fertilizers.

Further, as discussed above, all spent hazardous materials would be disposed of in accordance with DTSC regulations. The normal routine use of these hazardous materials products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the project. As such, impacts associated with a hazard to the public or the environment from the release of hazardous materials would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) The closest school to the project site is St. John's Lutheran School of Orange, which is located approximately 0.6 miles southeast of the project site. Thus, no schools are located within 0.25 mile of the project site. Construction and operation of the project would utilize petroleum-based fuels or hydraulic fluid used by construction equipment, and sodium hypochlorite for disinfection during well operations. However, the project would comply with all relevant and applicable federal, state, and local laws and regulations that pertain to the release of hazardous materials during construction activities as described above. Thus, the project would not emit hazardous or handle acutely hazardous materials, substances, or waste within one-quarter mile of a school, and no impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

d) The Phase I Environmental Site Assessment did not identify the project site or any properties in the nearby area as included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Phase I 2020). In addition, a search of the California Department of Toxic Substances Control EnviroStor database did not identify the project site or any area within the project vicinity as a hazardous materials site. Thus, impacts related to hazards from being located on or adjacent to a hazardous materials site would not occur from implementation of the project.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

e) The project site is neither located within an airport land use plan, nor within two miles of a public airport. The nearest airport is John Wayne Airport, located approximately 8 miles south of the project site in the City of Santa Ana. In addition, the project site would not contain residential uses and would not generate permanent onsite employees. Therefore, impacts related to a safety hazard from airport operations would not occur from implementation of the project.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

f) The proposed project would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans.

Construction

During construction, truck haul trips would transport construction and debris materials to and from project site; however, these trips would not impact the roadway in a way that would impede emergency evacuations. The truck trips would not require closure of any roadways and would not block existing street access in the project vicinity. Therefore, no impacts related to an emergency response or evacuation plan would occur during construction.

Operation

Operation of the proposed well facilities and passive mini-park would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities consist of groundwater retrieval infrastructure which, during operation, would not interfere with traffic flows. Maintenance activities would be limited and typical to that of other similar City facilities. Thus, impacts related to an adopted emergency plan would be less than significant during operation.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

g) The project site is not in an area designated by California Department of Forestry and Fire Prevention (CAL FIRE 2020) as a Fire Hazard Severity Zone. In addition, the project site is developed and surrounded by developed areas. Implementation of the proposed project would not create hazardous fire conditions or expose construction workers to wildfire risks. Thus, no impacts would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

None.

Sources

California Department of Forestry and Fire Protection (CAL FIRE). Fire Hazard Severity Zone Map. Accessed:

<https://forestwatch.maps.arcgis.com/apps/Styler/index.html?appid=5e96315793d445419b6c96f89ce5d153> (Accessed July 21, 2020).

California Department of Toxic Substances Control Cortese List. Accessed: <https://calepa.ca.gov/SiteCleanup/CorteseList/> (Accessed July 21, 2020).

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) increase the rate or amount of surface runoff in a manner which would result in flooding in- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(f) Potentially impact stormwater runoff from construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(g) Potentially impact stormwater runoff from post-construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(i) Result in the potential for discharge of stormwater to affect the beneficial uses of the receiving waters?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(j) Create the potential for significant changes in the flow velocity or volume of stormwater runoff to cause environmental harm?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(k) Create significant increases in erosion of the project site or surrounding areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Preliminary Well Design Report (Slade & Associates 2019), prepared by Richard C. Slade & Associates, LLC, included as Appendix G.

Impact Analysis:

a) Installation of the proposed well, water treatment system, and connecting pipeline would include activities that have a potential to violate water quality standards or waste discharge requirements due to direct discharge of water brought to the surface during well testing. The Santa Ana Regional Water Quality Control Board (RWQCB) would have jurisdiction over the groundwater quality and surface water discharges for the new well.

Construction

The proposed project may result in some soil erosion during drilling and construction activities. Due to the disturbed nature and flat topography of the project site, the potential for the project to cause substantial soil erosion, and subsequent water quality impacts is low.

Construction of the proposed well system and passive mini-park would use chemicals and solvents such as fuel and lubricating grease for motorized heavy equipment, which could also come into contact with stormwater by way of inadvertent spills or releases. In the absence of proper controls, these potentially harmful materials could be accidentally spilled or improperly disposed of during construction activities and could wash into and pollute surface waters or groundwater, resulting in a significant impact to water quality.

However, the use of BMPs during construction would serve to ensure that project impacts related to construction activities resulting in a degradation of water quality would be less than significant. In particular, erosion control BMPs would be used to prevent the degradation of water quality in the construction area. Other BMPs that could be used to enhance erosion control include scheduling to avoid wet weather events; preservation of existing vegetation where feasible; hydraulic mulching; hydroseeding; using soil binders; straw mulching; using geotextiles, plastic covers, and erosion control blankets/mats; and wood mulching. Examples of erosion control BMPs are installing a silt fence; creating a sediment/desilting basin; installing sediment traps; installing check dams; using fiber rolls; creating gravel bag berms; street sweeping and vacuuming; creating a sandbag barrier; creating a straw bale barrier; and storm drain inlet protection. BMPs would also include practices for proper handling of chemicals such as avoidance of fueling at the construction site and overtopping during fueling, and installation of containment pans. Implementation of the BMPs in compliance with the City's permitting requirements would reduce potential erosion and sedimentation impacts to below a level of significance during construction.

Operation

The proposed project would operate well and park facilities, which would introduce the potential for pollutants such as, chemicals from cleaners, pesticides and sediment from landscaping, trash and debris, and oil and grease. These pollutants could potentially discharge into surface waters and result in degradation of water quality. However, the project would increase the amount of pervious surfaces and provide infiltration of runoff by onsite landscaping.

In addition, operation of the proposed well includes flushing the well system. Flushed well water and stormwater runoff would be captured and conveyed through the proposed pump-to-waste line to the storm drain, which would be regulated pursuant to the State Water Resources Control Board Order No. WQ2014-0194-DWQ that is related to groundwater well development rehabilitation and testing, to ensure that water quality is not degraded.

Overall, implementation of the BMPs and well operation pursuant to the existing requirements would ensure that the proposed project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality; and operational impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

b) The City's Urban Water Management Plan (UWMP) describes that the City relies on 70 percent groundwater, 25.9 percent imported water, and 4.1 percent recycled water. The groundwater is managed by the Orange County Water District (OCWD) manages basin water supply through the Basin Production Percentage (BPP), which is set based on groundwater conditions, availability of imported supplies, and precipitation.

The proposed project is the construction and operation of a well and park on an already paved (impervious surface) site. Therefore, it does not interfere with groundwater recharge. Conversely, the project includes areas of landscaping that would increase infiltration in comparison to the existing condition. Therefore, impacts related to interference with groundwater recharge would not occur.

The proposed project would not generate a need for substantial amounts of water. A small volume of water would be required for landscape irrigation within the mini-park; however, this quantity of water is minimal and can be served by the City's existing water supply. In addition, the new well would provide infrastructure redundancy and does not generate an additional demand for water. Therefore, the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge, and impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) i) Construction and demolition activities would disturb and expose soil, which could be moved by wind and water, resulting in erosion and sedimentation of stormwater runoff. However, the project site does not include any slopes, which reduces the erosion potential and the large majority of soil disturbance would be related to excavation and backfill for installation of well infrastructure and development of the mini-park. The use of BMPs during construction, as required by the City's construction requirements would serve to ensure that project impacts related to construction activities resulting in a degradation of water quality would be less than significant.

In addition, runoff from the project area would be collected and conveyed to landscaped areas or the proposed 18-inch storm drain on the northern portion of the site to the existing storm drain on Lemon Street. The pervious areas would be landscaped with groundcovers that would inhibit erosion. Therefore, implementation of the proposed project facilities would not result in substantial erosion or siltation on or offsite. Impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) ii) The project site does not include, and is not adjacent to, a natural stream or river. As detailed previously, the project site is completely paved and implementation of the project would increase pervious surfaces that would reduce runoff. In addition, runoff generated by the proposed project would be conveyed to landscaped areas or the existing storm drain, such that drainage would be controlled and would not result in an increase in runoff that could result in on or off-site flooding. Therefore, the proposed project would not increase the rate or amount of surface runoff in a manner which would result in flooding onsite or off-site, and impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) iii) As described previously, the project site does not include, and is not adjacent to, a natural stream or river. The project site is completely paved, and implementation of the project would increase pervious surfaces that would reduce runoff. In addition, runoff generated by the proposed project would be conveyed to either landscaped areas or the existing storm drain. As such, the proposed project would not contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Thus, impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) iv) According to the Federal Emergency Management Agency (FEMA) Map 06059C0161J, the project site not within a flood zone (FEMA 2020). As detailed in the previous responses, implementation of the project would increase pervious surfaces on the project site that would reduce stormwater drainage. Further, the structure developed by the project would not have the scale or massing to substantially alter flood flows within the already highly developed project area. Therefore, no impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

d) According to the FEMA Map 06059C0161J, the project site not within a flood zone (FEMA 2020). Thus, the project site is not located within a flood hazard area that could be inundated with flood flows and result in release of pollutants. Impacts related to flood hazards and pollutants would not occur from the project.

Tsunamis are generated ocean wave trains generally caused by tectonic displacement of the sea floor associated with shallow earthquakes, sea floor landslides, rock falls, and exploding volcanic islands. The proposed project is approximately 12 miles from the ocean shoreline. Based on the distance of the project site to the Pacific Ocean, the project site is not at risk of inundation from tsunamis. Therefore, the proposed project would not risk release of pollutants from inundation from a tsunami. No impact would occur.

Seiching is a phenomenon that occurs when seismic ground shaking induces standing waves (seiches) inside water retention facilities (e.g., reservoirs and lakes). Such waves can cause retention structures to fail and flood downstream properties. The project site is not located adjacent to any water retention facilities. For this reason, the project site is not at risk of inundation from seiche waves. Therefore, the proposed project would not risk release of pollutants from inundation from seiche. No impact would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

e) As described previously, the proposed project is the construction and operation of a well and park on an already paved (impervious surface) site. Therefore, it does not interfere with groundwater recharge. Conversely, the project includes areas of landscaping that would increase infiltration in comparison to the existing condition. Therefore, impacts related to groundwater management or recharge would not occur.

The proposed project would not generate a need for substantial amounts of water. A small volume of water would be required for landscape irrigation within the mini-park; however, this quantity of water is minimal and can be served by the City's existing water supply (as described in Section 16 Utilities). In addition, the new well would provide infrastructure redundancy and does not generate an additional demand for water. Therefore, the proposed project would not substantially deplete groundwater supplies.

In addition, operation of the proposed well includes flushing the well system. Flushed well water and stormwater runoff would be captured and conveyed through the proposed pump-to-waste line to the storm drain, which would be regulated pursuant to the State Water Resources Control Board Order No. WQ2014-0194-DWQ that is related to groundwater well development rehabilitation and testing, to ensure that water quality is not degraded. Therefore, impacts related to water quality control plan or sustainable groundwater management plan would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

f) As described in the previous response, construction of the proposed project would require asphalt removal and excavation activities that could temporarily impact stormwater runoff during construction activities. However, implementation of the project requires the implementation of the BMPs pursuant to the City's requirements that would address site specific pollutant and drainage issues related to construction of the project. Thus, impacts related to stormwater runoff, and impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

g) As described previously, the proposed project would not result in an increase of impervious surfaces that would generate increased runoff. Conversely, greater areas of pervious surfaces would exist onsite and stormwater runoff would be accommodated by the proposed landscaping and the existing storm drain. As such, the proposed project would not increase stormwater runoff from post-construction activities, and impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

h) As described in Section 9, *Hazards and Hazardous Materials*, operation of the proposed well would require limited transport, storage, use, and disposal of hazardous materials. The project would involve the use of sodium hypochlorite for disinfection, which would be contained in a double walled safety tank. In addition, the chemical storage area would be enclosed and usage would comply with existing federal and State requirements administered by the California Division of Occupational Safety and

Health, which would reduce the potential for pollutants to discharge. Therefore, impacts would be less than significant.

Also, operation of the passive mini-park does not involve material storage, vehicle or equipment fueling, vehicle or equipment maintenance, waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas. Thus, impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

i) As described previously, the project site is fully paved with asphalt in its existing condition and implementation of the project would install landscaping that would reduce stormwater discharge and capture pollutants. The project would provide a hydrological improvement over existing conditions and would not result in a discharge of stormwater that would affect the beneficial uses of the receiving waters. Thus, impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

j) As described previously, the project site is fully paved with asphalt in its existing condition and implementation of the project would install landscaping that would reduce stormwater discharge. The project would provide a hydrological improvement over existing conditions and would not increase stormwater flow velocity or volume. Thus, no impacts would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

k) As discussed in Response (c)(i), construction and demolition activities would disturb and expose soil, which could be moved by wind and water, resulting in erosion and sedimentation of stormwater runoff. However, the project site does not include any slopes, which reduces the erosion potential and the large majority of soil disturbance would be related to excavation and backfill for installation of building foundations and underground utilities. The use of BMPs during construction, as required by the City would serve to ensure that project impacts related to increases in erosion of the project site or surrounding areas would be less than significant.

In addition, the proposed project would be implemented on a site that is paved with asphalt and fully impervious. The project would install landscaping that would reduce the potential for erosion. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City's Public Works Department to ensure that the site-specific design limits the potential for erosion of the project site or surrounding areas. Overall, the proposed drainage system and adherence to the existing regulations would ensure that project impacts related to erosion would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

Existing Plans, Programs, or Policies

None.

Sources

City of Orange 2015 Urban Water Management Plan. Accessed:
<https://www.cityoforange.org/Archive/ViewFile/Item/171> (accessed July 17, 2020).

Preliminary Well Design Report, Proposed Well No. 28, City of Orange, Orange County, California. October 2019. Prepared by Richard C. Slade & Associates, LLL. Appendix G.

Federal Emergency Management Agency (FEMA). 2020. Flood Insurance Rate Map (FIRM) Map No. 06059C0161J. Accessed: <https://msc.fema.gov/portal/home>

11. LAND USE/PLANNING. <i>Would the project:</i>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Impact Analysis:

a) The project site is currently a vacant lot that is fully paved with asphalt. The project site is located in a highly developed area and is surrounded on all sides by streets, commercial, residential and institutional development. The proposed project would redevelop the site to construct a new well, well facilities, and a passive mini-park. Therefore, the change of the project site from a vacant parking lot to a new well with associated well facilities and a passive mini-park would not physically divide an established community. In addition, the project would not change roadways, pedestrian bridges, or install any infrastructure that would result in a physical division. Thus, the proposed project would not result in impacts related to physical division of an established community.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) As described previously, is located in an urban setting surrounded on all sides by streets, industrial, residential and institutional development. The project site is developed with a vacant lot that is fully paved with asphalt. The project would redevelop the project site to construct a new well facility and a passive mini-park.

The project site has a General Plan land use designation of Public Facilities and Institutions (PFI), which permits for an intensity of 0.5 Floor Area Ratio (FAR) for civic uses, schools and public facilities and an intensity off 2.0 FAR for institutions, such as universities and hospitals. The designation is intended to provide for several types of public, quasi-public and institutional land uses. The proposed project includes development of a 3,900 square foot sound enclosure and a SCE transformer that would be 10-feet wide and 8 feet long (80 square feet). Thus, the equipment coverage on the 15,695 SF (0.36 acre) site would equal 3,980 square feet, which equates to a FAR of 0.25; and is within the PFI intended lot coverage. In addition, the proposed well facility and mini-park would support the surrounding mixed use area that includes a combination of residential, commercial, industrial and institutional uses as intended by uses in the PFI designated area. Therefore, implementation of the well infrastructure and mini-park on the site would not conflict with the General Plan land use plan.

The zoning designation of the project site is Public Institution (P-I (SP)), Santa Fe Depot Specific Plan, and Chapman University Specific Plan. Section 17.24.010 of the Orange Municipal Code states that the P-I zoning district is for a wide range of public and quasi-public uses. As detailed by the Orange Municipal Code (OMC), the requirements for the P-I zone include a minimum building lot area of 6,000 square feet, and a building height maximum of 32 feet in areas within 120 feet of any residentially zoned area. As described previously, the proposed project site is 15,695 square feet; thus, within the 6,000 square feet minimum building area. In addition, the proposed structures would be a maximum of 16-feet in height, which is within the 32-foot height maximum. Furthermore, the proposed well facilities and

mini-park provides public uses. Therefore, the proposed project is consistent with the PI zoning, and impacts would not occur.

The purpose of the Santa Fe Depot Specific Plan is to build an environment around the Santa Fe Depot that supports and facilitates transit use by capitalizing on pedestrian traffic and encouraging a mix of employment, shopping and residential uses within easy walking distance of the Orange Transportation Center. The Santa Fe Depot Specific Plan describes that the water infrastructure, pressure, and flow in the area needs improvements, which include new water lines on Maple Avenue between Cypress Street and Olive Street; and on Lemon Street between Palm Avenue and Chapman Avenue. These planned water infrastructure improvements are adjacent to the project site and are consistent with the proposed well infrastructure. Thus, implementation of the project is consistent with the Santa Fe Depot Specific Plan, and impacts would not occur.

The purpose of the Chapman University Specific Plan is to serve as a planning tool that implements the physical development of the University campus. The project site is identified in the University Specific Plan for Public Facilities Institutions (PFI) uses with a maximum FAR of 2.0. As described previously, the proposed well equipment on the site would result in a FAR of 0.25, which is within the allowable FAR of 2.0. In addition, the University Specific Plan includes a Community Facilities and Services Plan that identifies water lines on Maple Avenue and Lemon Street, which are adjacent to the project site and consistent with the proposed well infrastructure. The project is consistent with the Chapman University Specific Plan, and impacts would not occur.

Overall, the proposed project would be consistent with the General Plan land use plan, zoning designation, Santa Fe Depot Specific Plan, and the Chapman University Specific Plan. Thus, the proposed project would not conflict with any applicable land use or zoning regulations adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

Existing Plans, Programs, or Policies

None.

Sources

City of Orange General Plan. Accessed: <https://www.cityoforange.org/391/General-Plan> (accessed July 20, 2020).

City of Orange Municipal Code. Accessed: https://library.municode.com/ca/orange/codes/code_of_ordinances?nodeId=ORANGEMUCO

Chapman University Specific Plan. Accessed: <https://www.cityoforange.org/DocumentCenter/View/10040/Specific-Plan-Amendment-7-Draft-dated-September-2019> (accessed July 20, 2020).

Santa Fe Depot Specific Plan. Accessed: <https://www.cityoforange.org/DocumentCenter/View/614/Santa-Fe-Depot-Specific-Plan-Update---Final-PDF> (accessed July 20, 2020).

12. MINERAL RESOURCES. <i>Would the project:</i>		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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Impact Analysis:

a) The project site is designated Mineral Resource Zone 3 by the California Geological Survey, meaning that the site is in an area containing mineral deposits whose significance cannot be evaluated from available data. As described previously, the project site is fully paved with asphalt and surrounded by developed areas, which do not include mining. Thus, implementation of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the state, and impacts would not occur.

Significance Determination: No impact.
Mitigation Measures: No mitigation measures are required.
Significance Determination After Mitigation: No impact.

b) The City of Orange General Plan Natural Resources Element, Santa Fe Depot Specific Plan, and Chapmen University Specific Plan do not identify the project site or surrounding area as potentially having mineral resources. Thus, no impacts related to the loss of availability of a locally important mineral resource recovery site, as delineated on a local general plan, specific plan, or other land use plan, would occur as a result of the project.

Significance Determination: No impact.
Mitigation Measures: No mitigation measures are required.
Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

None.

Sources

City of Orange General Plan. Accessed: <https://www.cityoforange.org/391/General-Plan> (accessed July 20, 2020)

California Geological Survey (CGS). 1994. Open File Report 94-15: Generalized Mineral Land Classification of Orange County, California. Plate 1. Accessed: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-15/OFR_94-15_Plate_1.pdf (accessed July 20, 2020)

Chapman University Specific Plan. Accessed: <https://www.cityoforange.org/DocumentCenter/View/10040/Specific-Plan-Amendment-7-Draft-dated-September-2019> (accessed July 20, 2020).

Santa Fe Depot Specific Plan. Accessed:
[https://www.cityoforange.org/DocumentCenter/View/614/Santa-Fe-Depot-Specific-Plan-Update---
Final-PDF](https://www.cityoforange.org/DocumentCenter/View/614/Santa-Fe-Depot-Specific-Plan-Update---Final-PDF) (accessed July 20, 2020).

13. NOISE. <i>Would the project result in:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the Noise Impact Analysis (NOI 2020), Prepared by Urban Crossroads, included as Appendix H.

Noise Element of the General Plan

The City’s General Plan Noise Element includes a land use compatibility matrix to determine if new land uses are compatible with the existing noise environment. The project site has a General Plan land use designation of Public Institution (P-I), which has an exterior noise level maximum of 65 dBA for sites developed with noise sensitive uses (e.g. schools, nursing homes, day care facilities, hospitals, convalescent facilities, dormitories). The Noise Element does not assign noise level maximums for other uses on lands designated as P-I. Areas designated by the General Plan as Old Towne Mixed Use and the adjacent residential uses have an exterior noise level maximum of 65 dBA.

Municipal Code

Section 8.24.50(K), Exemptions from Chapter Provisions. This municipal code exempts noise sources associated with any maintenance or construction activity undertaken by a public agency.

Section 8.24.040, Exterior Standards. This municipal code section provides the following noise standards for fixed noise sources at residential properties:

Table N-1: Exterior Noise Standards from Fixed Noise Sources

Land Use	Exterior Noise Level Criteria	
	Daytime	Nighttime
Residential	55 dBA L _{eq}	50 dBA L _{eq}

City of Orange Municipal Code Section 8.24.040. Per Section 8.24.040(B), 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). "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Federal Transit Administration

The construction noise threshold from *Transit Noise and Vibration Impact Assessment* (2018), identifies a significant construction noise impact if construction noise exceeds 80 dBA L_{eq} over an eight-hour period during the daytime or exceeds 70 dBA L_{eq} at nighttime at sensitive receivers (e.g. residential,

etc.). In addition, the FTA includes a 30-day average noise level threshold of 75 dBA Ldn to account for long-term construction noise impacts.

The *Transit Noise and Vibration Impact Assessment* (2018) provide thresholds for increases in ambient noise from vehicular traffic based on increases to ambient noise. An impact would occur if existing noise levels at noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the project creates an increase of 3 dBA CNEL or greater project-related noise level increase; or if existing noise levels range from 60 to 65 dBA CNEL and the project creates 2 dBA CNEL or greater noise level increase.

Caltrans Transportation and Construction Vibration Guidance Manual

Because the City Orange does not have numeric vibration level thresholds, the Caltrans Transportation and Construction Vibration Guidance Manual vibration damage and annoyance criteria are used to assess potential temporary construction-related impacts at adjacent receiver locations.

Caltrans identifies a building damage vibration level threshold for older residential structures of 0.3 in/sec PPV; for historic buildings, the maximum acceptable continuous vibration threshold is reduced to 0.25 PPV (in/sec). To describe the human annoyance due to construction vibration levels, the analysis below relies on the distinctly perceptible maximum transient vibration threshold of 0.25 PPV (in/sec); and the continuous vibration threshold of 0.04 PPV (in/sec).

Sensitive Receptors

Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. The City Orange General Plan Noise Element defines noise-sensitive uses as residences, hospitals, convalescent and day care facilities, schools, and libraries.

The nearest sensitive receiver where an individual can stay for a 24-hour period to the project site are the residences at 214 N Olive Street (Receiver R2) located 25 feet east of the project site. To assess the project related noise impacts, seven receiver locations in the vicinity of the project site were identified:

- R1: Location R1 is the exterior façade of the multi-family residences located at 224 N Olive Street roughly 36 feet northeast of the project site. Since there are no outdoor common recreation areas at this location the noise sensitive receiver is placed at the building façade.
- R2: Location R2 is the existing multi-family residences located at 214 N Olive Street, roughly 25 feet east of the project site. Since there are no outdoor common recreation areas facing the project site, receiver R2 is placed at the façade of the building.
- R3: Location R3 is the Chapman University Elliott Alumni House located at 204 N Olive Street. This historic building is located roughly 56 feet east of the project site. Since there are outdoor common recreation areas facing the project site, receiver R3 is placed at the building façade.
- R4: Location R4 is the two-story multi-family residences located at 210 W Maple Avenue roughly 79 feet southeast of the project site. Since the only outdoor common recreation areas is located behind the building structure in the central courtyard, receiver R4 is placed at the building façade.
- R5: Location R5 is the residence located at 193 N Lemon Street. Since there are no private outdoor living areas (e.g. backyards) facing the project site, receiver R5 is placed at the building façade.

- R6: Location R6 is the Old Town West Parking Structure. This non-noise sensitive receiver is located approximately 108 feet southwest of the Project site.
- R7: Location R7 is the exterior building façade of the Chapman University Dodge College facility. This institutional land use located 187 feet northwest of the project site.

Existing Noise Levels

As detailed in the Noise Impact Analysis (Appendix H), to describe the existing noise environment, noise levels were measured during typical weekday conditions over a 24-hour period on Friday August 14, 2020. A description of the locations and the existing noise levels are provided in Table N-2 below.

Table N-2: Summary of 24-Hour Ambient Noise Level Measurements

Location	Description	Energy Average Noise Level (dBA L _{eq}) ²		CNEL
		Daytime	Nighttime	
L1	Located northeast of the project site near multi-family residences at 224 North Olive Street.	63.5	51.9	63.1
L2	Located east of the project site near existing multi-family residences at 214 North Olive Street.	63.6	51.4	63.2
L3	Located east of the project site near the Chapman University Elliott Alumni House at 204 North Olive Street.	65.0	51.7	64.2
L4	Located southeast of the project site on Maple Avenue near multi-family residences at 210 West Maple Avenue.	67.3	57.1	67.4
L5	Located south of the project site on Maple Avenue near a single-family residence at 193 North Lemon Street.	70.9	55.4	69.7
L6	Located southwest of the project site on Lemon Avenue and Maple Avenue near the Old Town West Parking Structure.	75.7	59.6	74.4
L7	Located northwest of the project site near Chapman University Dodge College at 283 North Cypress Street.	64.3	59.3	67.2

Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.
 "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.
 Source: Appendix H

Table N-2 shows that the existing ambient noise exceeds the City’s exterior residential noise standard of 55 dBA L_{eq} for daytime hours and 50 dBA L_{eq} for nighttime hours that is detailed in Municipal Code Section 8.24.040.

Figure 10: Noise Measurement Locations



- LEGEND:**
- Site Boundary
 - Measurement Locations

Impact Analysis:

a) Implementation of the proposed project would generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project during construction and operations.

Construction

Noise generated by construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The Project construction activities are expected to occur in the following stages: mobilization; well drilling; casing; well testing; well mechanical; well surveying/demobilization; and mini-park construction.

Section 8.24.50(K), *Exemptions from Chapter Provisions*, of the City's Municipal Code, states that noise sources associated with construction activity undertaken by a public agency are exempt from the municipal code noise standards. The City's Public Works Department would implement the proposed project; therefore, the construction related noise would be exempted, and impacts related to construction noise standards would not occur.

Neither the City's General Plan nor Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, to determine if a substantial temporary or periodic noise increase would occur. Thus, the construction noise thresholds from the FTA *Transit Noise and Vibration Impact Assessment* (2018), have been utilized, which identifies a significant construction noise impact if construction noise at sensitive receptors exceeds 70 dBA L_{eq} during the nighttime or 75 dBA CNEL in the daytime for construction projects lasting over 30 days.

Construction of the well would involve removal of the existing asphalt and the drilling of the well head, which is expected to occur 24 hours a day, 7 days a week for a period of three weeks. The proposed project includes installation of a temporary 24-foot high (approximately 500 linear foot) sound wall that would be installed to enclose the well area during the 3 week well drilling operations.

The installation of additional well infrastructure and mini-park would follow, with resurfacing of the site, perimeter landscaping, wall and/or fence installation, and driveway, curb, and water line installation completing the construction process. Construction activities apart from well drilling are expected to occur from 7:00 a.m. to 5:00 p.m. and would be concluded in approximately 1.5 years. The operation of each piece of construction equipment would not be constant throughout the construction day during this time, and equipment would be turned off when not in use. The typical operating cycle for a piece of construction equipment involves one or two minutes of full power operation followed by three or four minutes at lower power settings.

The closest sensitive receivers are located 25 to 187 feet from proposed construction activities at the property boundary. As shown on Table N-3, the 24-hour CNEL construction noise levels with installation of the 24-foot high construction noise barrier that would enclose the well area during the 24-hour well drilling activities would range from 57.6 to 67.5 dBA CNEL at the nearby receiver locations, which would not exceed the 75 dBA CNEL daytime significance threshold. In addition, Table N-4 shows that the nighttime noise levels during well drilling activities would range between 51.0 and 60.8 dBA L_{eq} , and would not exceed the 70 dBA L_{eq} nighttime significance threshold with the proposed 24-foot high construction noise barrier installed. Therefore, impacts related to construction noise would be less than significant.

Table N-3: 24-Hour Construction Noise Levels

Receiver Location	Distance to Const. Activity (Feet)	Construction Noise Levels (dBA CNEL)							Threshold (dBA CNEL)	Threshold Exceeded
		Mobilization	Well Drilling	Casing	Well Testing	Well Mechanical	Well Survey	Highest Levels		
R1	36'	57.5	61.5	57.5	61.5	61.5	57.5	61.5	75	No
R2	25'	58.6	62.6	58.6	62.6	62.6	58.6	62.6	75	No
R3	56'	57.1	61.1	57.1	61.1	61.1	57.1	61.1	75	No
R4	79'	62.8	66.8	62.8	66.8	66.8	62.8	66.8	75	No
R5	87'	63.5	67.5	63.5	67.5	67.5	63.5	67.5	75	No
R6	108'	57.9	61.9	57.9	61.9	61.9	57.9	61.9	75	No
R7	187'	53.6	57.6	53.6	57.6	57.6	53.6	57.6	75	No

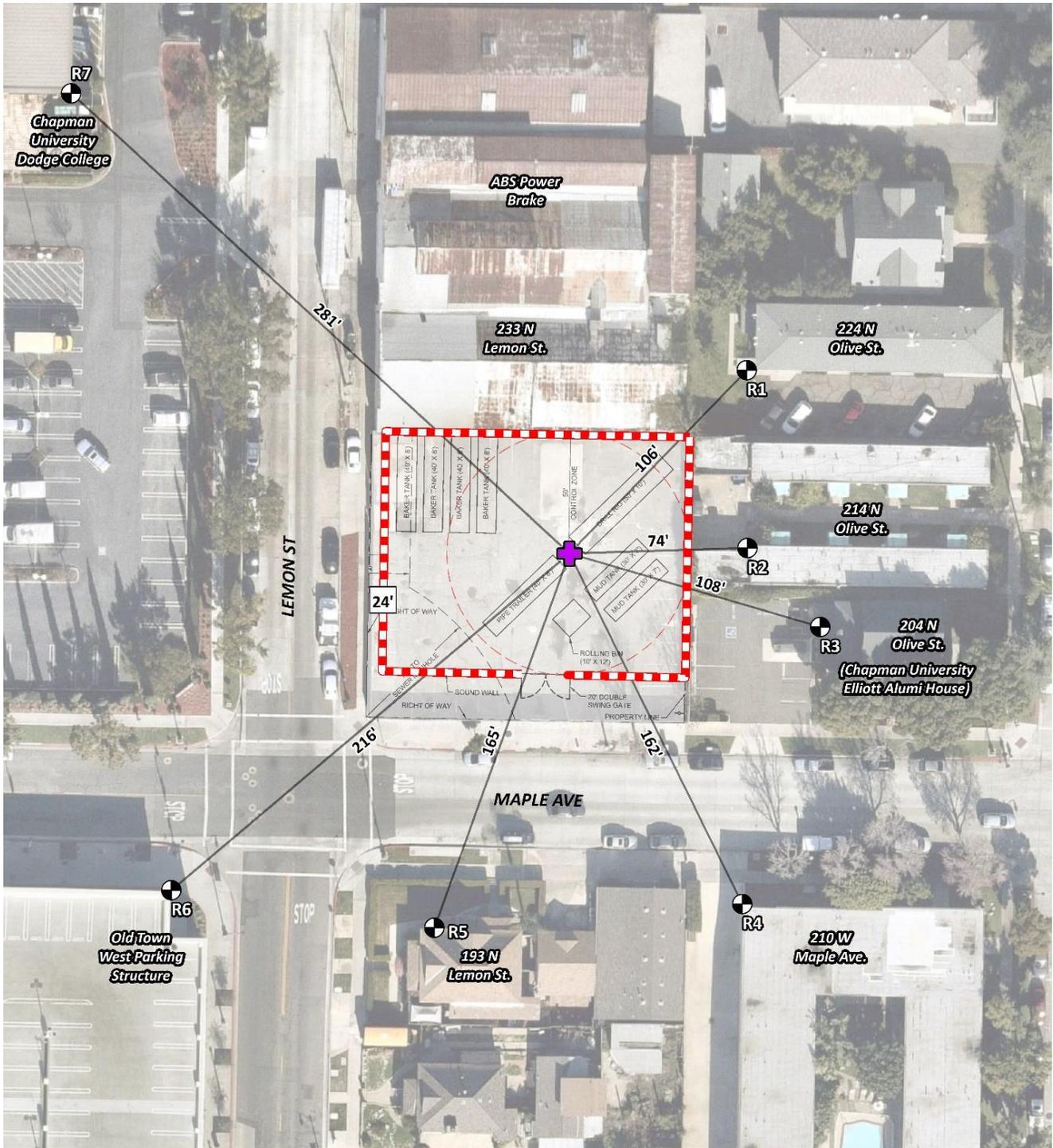
Source: Appendix H

Table N-4: Nighttime Construction Noise Levels

Receiver Location	Distance to Const. Activity (Feet)	Construction Noise Levels (dBA L _{eq})							Threshold (dBA L _{eq})	Threshold Exceeded
		Mobilization	Well Drilling	Casing	Well Testing	Well Mechanical	Well Survey	Highest Levels		
R1	36'	50.9	54.9	50.9	54.9	54.9	50.9	54.9	70	No
R2	25'	52.0	56.0	52.0	56.0	56.0	52.0	56.0	70	No
R3	56'	50.4	54.4	50.4	54.4	54.4	50.4	54.4	70	No
R4	79'	56.1	60.1	56.1	60.1	60.1	56.1	60.1	70	No
R5	87'	56.8	60.8	56.8	60.8	60.8	56.8	60.8	70	No
R6	108'	51.2	55.2	51.2	55.2	55.2	51.2	55.2	70	No
R7	187'	47.0	51.0	47.0	51.0	51.0	47.0	51.0	70	No

Source: Appendix H

Figure 12: Well Drilling and Receiver Locations



- LEGEND:**
-  N
 -  Receiver Locations
 -  Well Location
 -  Construction Barrier
 -  24' Barrier Height (in feet)

Operation

The project would install the well pump within a 14-foot high sound enclosure structure, which would be surrounded by a 16-foot high architectural screen wall and gates. These surroundings would reduce the operational noise of the well pump. As shown on Table N-5, operational noise levels from the well equipment would range from 39.8 to 47.3 dBA L_{eq} at the nearby receiver locations, which is less than the City's municipal code exterior noise level thresholds of 55 dBA L_{eq} during daytime hours and 50 dBA L_{eq} during nighttime hours. Therefore, operational noise impacts would be less than significant.

Table N-5: Operational Noise Levels

Receiver Location	Project Operational Noise Levels (dBA Leq)		Noise Level Standards (dBA Leq)		Noise Level Standard Exceeded?	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	46.5	46.5	55	50	No	No
R2	47.3	47.3	55	50	No	No
R3	47.0	47.0	55	50	No	No
R4	44.4	44.4	55	50	No	No
R5	44.2	44.2	55	50	No	No
R6	41.8	41.8	55	50	No	No
R7	39.8	39.8	55	50	No	No

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Source: Appendix H

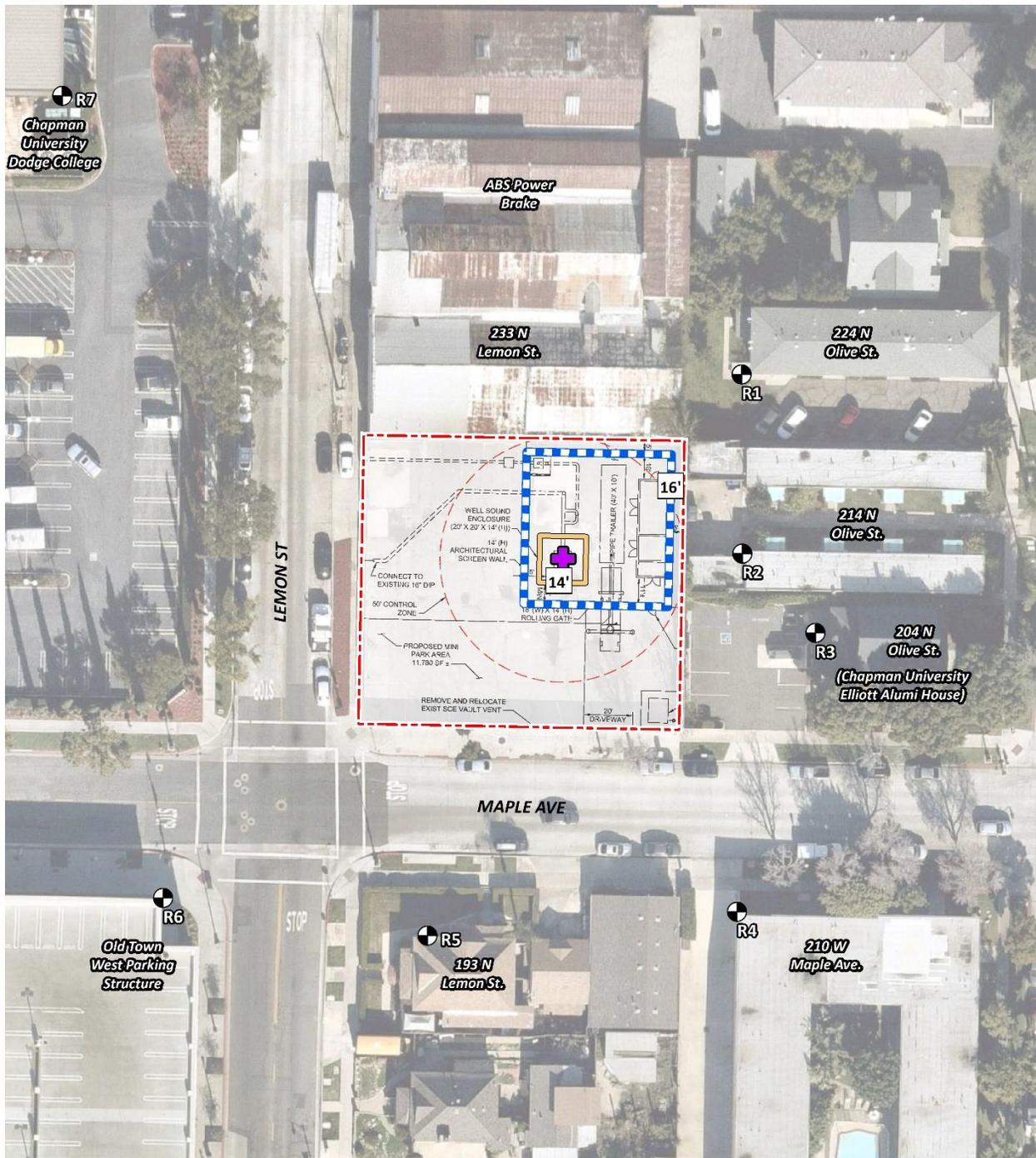
In addition to identify the increase in ambient noise levels that would occur from operation of the proposed project, the project generated noise levels are combined with the existing ambient noise levels measurements at the nearby receiver locations. As shown on Tables N-6 and N-7, the Project would generate a daytime and nighttime operational noise level increases ranging from 0.0 to 1.4 dBA L_{eq} at the nearby receiver locations, which is less than the 3 dBA L_{eq} threshold. Therefore, the project related ambient noise level increases would be less than significant.

Table N-6: Daytime Operational Noise Level Increases

Receiver Location	Project Operational Noise Level	Measurement Location	Existing Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	46.5	L1	63.5	63.6	0.1	5	No
R2	47.3	L2	63.6	63.7	0.1	5	No
R3	47.0	L3	65.0	65.1	0.1	3	No
R4	44.4	L4	67.3	67.3	0.0	3	No
R5	44.2	L5	70.9	70.9	0.0	3	No
R6	41.8	L6	75.7	75.7	0.0	3	No
R7	39.8	L7	64.3	64.3	0.0	5	No

Source: Appendix H

Figure 13: Operational Noise and Receiver Locations



- LEGEND:**
- Site Boundary
 - Proposed Barrier
 - Receiver Locations
 - Well Sound Enclosure
 - Well Location
 - 16' Barrier Height (in feet)

Table N-7: Nighttime Operational Noise Level Increases

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	46.5	L1	51.9	53.0	1.1	5	No
R2	47.3	L2	51.4	52.8	1.4	5	No
R3	47.0	L3	51.7	53.0	1.3	5	No
R4	44.4	L4	57.1	57.3	0.2	5	No
R5	44.2	L5	55.4	55.7	0.3	5	No
R6	41.8	L6	59.6	59.7	0.1	5	No
R7	39.8	L7	59.3	59.3	0.0	5	No

Source: Appendix H

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

b) Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Vibration amplitude can be expressed in peak particle velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak of vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings. PPV is expressed in inches per second (in/sec).

Construction

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance.

Construction activities associated with the proposed project would require the operation of heavy construction equipment, trucks, and well drilling equipment which are known sources of vibration. Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type.

To assess the project construction vibration levels, both the transient vibration levels associated with typical construction equipment activities, as well the continuous vibration levels associated with the 3 weeks of well drilling activities were analyzed. At distances ranging from 25 to 187 feet from project construction activity, the transient construction vibration velocity levels are estimated to range from 0.004 to 0.076 PPV in/sec, as shown on Table N-8. At distances ranging from 74 to 281 feet from well drilling activity, the continuous construction vibration velocity levels are estimated to range from 0.002 to 0.017 PPV in/sec, as shown on Table N-9.

These vibration levels are below the building damage vibration level threshold for historic buildings of 0.25 PPV in/sec, and below the human annoyance transient vibration threshold of 0.25 PPV (in/sec); and the continuous vibration threshold of 0.04 PPV (in/sec). Therefore, potential vibration impacts from project construction would be less than significant.

Table N-8: Vibration Source Levels for Typical Construction Equipment

Receiver	Receiver Structure Type and Condition	Distance to Const. Activity (Feet)	Typical Construction Vibration Levels PPV (in/sec)				Thresholds PPV (in/sec)		Thresholds Exceeded?	
			Small Bulldozer (< 80k lbs)	Jack-hammer	Loaded Trucks	Highest Vibration Level	Human Annoyance	Building Damage	Human Annoyance	Building Damage
R1	Older residential structures	36'	0.002	0.020	0.044	0.044	0.25	0.50	No	No
R2	Older residential structures	25'	0.003	0.035	0.076	0.076	0.25	0.50	No	No
R3	Historic and some old buildings	56'	0.001	0.010	0.023	0.023	0.25	0.50	No	No
R4	Older residential structures	79'	0.001	0.006	0.014	0.014	0.25	0.50	No	No
R5	Historic and some old buildings	87'	0.000	0.005	0.012	0.012	0.25	0.50	No	No
R6	Modern industrial/commercial buildings	108'	0.000	0.004	0.008	0.008	0.25	2.00	No	No
R7	Modern industrial/commercial buildings	187'	0.000	0.002	0.004	0.004	0.25	2.00	No	No

Source: Appendix H

Table N-9: Well Drilling Vibration Levels

Receiver	Receiver Structure Type and Condition	Distance to Well Drilling (Feet)	Well Drilling Vibration Levels PPV (in/sec)	Thresholds PPV (in/sec)		Thresholds Exceeded?	
				Human Annoyance	Building Damage	Human Annoyance	Building Damage
R1	Older residential structures	106'	0.010	0.04	0.50	No	No
R2	Older residential structures	74'	0.017	0.04	0.50	No	No
R3	Historic and some old buildings	108'	0.010	0.04	0.50	No	No
R4	Older residential structures	162'	0.005	0.04	0.50	No	No
R5	Historic and some old buildings	165'	0.005	0.04	0.50	No	No
R6	Modern industrial/commercial buildings	216'	0.004	0.04	2.00	No	No
R7	Modern industrial/commercial buildings	281'	0.002	0.04	2.00	No	No

Source: Appendix H

Operation

As discussed previously, development of the proposed project includes operation of the proposed well system and passive mini-park. Operation of the proposed well equipment and mini-park do not include any components that would produce vibration. Thus, operational impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) The project site is neither located within an airport land use plan, nor within two miles of a public airport. The nearest airport is John Wayne Airport, located approximately 8 miles south of the project site in the City of Santa Ana. Therefore, the proposed project would not expose people residing or working in the project site to excessive noise levels related to a public airport or public use airport. Thus, no impacts would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

None.

Sources

City of Orange General Plan. Accessed: <https://www.cityoforange.org/391/General-Plan> (accessed July 20, 2020)

Well 28 Noise Impact Analysis. Prepared by Urban Crossroads. Appendix H.

14. POPULATION AND HOUSING. <i>Would the project:</i>		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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Impact Analysis:

a) The proposed project would not involve the construction of any homes, businesses, or other uses that would result in direct population growth. Construction activities would require temporary employment and these opportunities are expected to be filled by workers within the local economy. In addition, operation of the proposed well system and passive mini-park would not require any new City employees.

The City’s Water Division is implementing infrastructure projects to enhance the reliability, efficiency, and redundancy of the City’s water production. The proposed project would construct a new water well and related infrastructure that would be powered by an SCE transformer. The project also includes an 11,780 square foot passive mini-park. As described in Section 11, Land Use/Planning, the proposed well facilities support planned water infrastructure on Maple Avenue and Lemon Street, which are adjacent to the project site. In addition, the project would not extend new infrastructure into unserved areas or other such improvements that could lead to indirect growth. As a result, implementation of the proposed project would not directly induce substantial population growth in the City’s service area. Thus, no impacts would occur.

Significance Determination: No impact.
Mitigation Measures: No mitigation measures are required.
Significance Determination After Mitigation: No impact.

b) There is currently no housing located on the project site, as the site is currently vacant and not used for housing. Construction of the project would not require the removal or displacement of existing housing, and therefore, would not require construction of replacement housing elsewhere. Thus, no impacts would occur.

Significance Determination: No impact.
Mitigation Measures: No mitigation measures are required.
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Impact Analysis:

(a) i) Fire protection and other related services in the City of Orange are provided by the Orange Fire Department. The closest Fire station to the project site is Station No. 1, located at located at 176 South Grand Street, which is located approximately 0.4 miles southeast of the project site.

The proposed project would remove existing asphalt on the project site and develop well infrastructure and a passive mini-park. The new well structures would include new fire prevention measures pursuant to current code requirements. The proposed project is required to adhere to the California Fire Code and California Building Code, as adopted by the Orange Municipal Code, which regulates safety provisions, emergency planning, fire-resistant construction, fire protection systems, and appropriate emergency access throughout the site. The project’s adherence to the existing fire code requirements would be verified as part of the regular development and well permitting process.

In addition, the proposed project would not result in a substantial change to existing demand for fire protection services because operation would not result in an increase of daily onsite employees or population. As described in Section 9, *Hazards and Hazardous Materials*, operation of the proposed well would require limited transport, storage, use, and disposal of hazardous materials. The project would involve the use of sodium hypochlorite for disinfection, which would be contained in a double walled safety tank. In addition, the chemical storage area would be enclosed, and usage would comply with existing federal and State requirements administered by the California Division of Occupational Safety and Health, which would reduce the potential for discharge.

During filling of storage tanks, maintenance personnel would be present to guard against spillage and comply with existing federal, State, and local requirements for sodium hypochlorite. In addition, containment facilities would also be installed in the event of a spill. These methods are currently in place at other well facilities in the City, which prevents the need for hazardous material services from the Fire Department.

The new mini-park is anticipated to be used by existing residents, Chapman University students, and local employees. The mini-park is not anticipated to result in new visitors to the City. Maintenance of the new facilities on the site would be regularly scheduled and would be consistent with maintenance at other existing City facilities. Therefore, the project would not result in the need for substantially

increased fire protection services, which could require new or expanded fire service facilities. Thus, impacts related to fire services would be less than significant.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

(a) ii) The project site is located within the service area of the Orange Police Department. The main police station is located at 1107 North Batavia Street, which is approximately 1.5 miles from the project site.

Redevelopment of the project site would result in a new well system and a passive mini-park. Crime and safety issues during project construction may include: theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism. During operation, the project is anticipated to generate a typical range of police service calls, such as theft, disturbances, and vandalism. Security concerns would be addressed by installation of a 16-foot high architectural screen wall with a man-gate, as a rolling gate, which would be installed around the buildings and well equipment. A 6-foot high wrought iron fence is also proposed, which would be installed along the northern and eastern project boundaries. Also, pursuant to the City's existing permitting process, the site plans have been reviewed by the City of Orange Police Department to ensure that the project would employ concepts of crime prevention through environmental design and would provide for site access to accommodate emergency services.

Also, the proposed project does not include new homes or businesses that would require any additional services or extended response times for police protection services beyond those required with the existing on-site uses. As described in the previous response, the new mini-park is anticipated to be used by existing residents, Chapman University students, and local employees. The mini-park is not anticipated to result in new visitors to the City. Therefore, the project would result in a substantial change to existing demand for police services, and the project would not result in the need for new or expanded police facilities, and impacts related to police services would be less than significant.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

(a) iii) The project includes development of a passive mini-park and well facility. The proposed project would not result in a change in demand for schools because that new well facilities would not result in the need for new employees or create a new population, which may require school services. As described previously, the new mini-park is anticipated to be used by existing residents, Chapman University students, and local employees. Therefore, the project would not result in the need for new or expanded school facilities, and impacts related to school services would be less than significant.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

(a) iv) The project includes development of a passive mini-park. In addition, the proposed project would not result in a substantial change in demand for parks because the new well facility and new park would

not result in the need for additional employees or create a new population. The new mini-park is anticipated to be used by existing residents, Chapman University students, and local employees. The mini-park is not anticipated to result in new visitors to the City. Therefore, the project would not result in the need for new or expanded park facilities, and impacts related to park services would be less than significant.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

(a) v) As described previously, the proposed project would redevelop a vacant lot for use as a well system and passive mini-park. The proposed project would not result in an increase in employees or population; and temporary construction workers would not be expected to relocate their places of residence and need other public services (such as public libraries and post offices, etc.) as a consequence of working on the project. Therefore, the project would not result in the need for new or physically altered facilities to provide other services, the construction of which could cause significant environmental impacts. No impacts would occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

None.

Sources

City of Orange General Plan. Accessed: <https://www.cityoforange.org/391/General-Plan> (accessed July 20, 2020)

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Impact Analysis:

a) The City of Orange maintains the local parks and provide recreational services for the project area. The proposed project would redevelop the vacant site for a new well system and a passive mini-park. As described previously, the proposed project would not result in new residents or employees. Therefore, the proposed project would not increase the use of existing recreational facilities such that physical deterioration of the facility would occur or be accelerated. Conversely, the new passive mini-park provided by the project could reduce the park demand at other existing facilities. Overall, impacts related to physical deterioration of a recreation facilities would not occur from the proposed project.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) As described above, the proposed project includes the construction of a passive mini-park. The impacts of development of the park are considered part of the impacts of the proposed project as a whole and are analyzed throughout the various sections of this MND. For example, activities such as excavation, grading, and construction as required for the park are analyzed in the Air Quality, Greenhouse Gas Emissions, Noise, and Transportation Sections of this MND. The mini-park would function as a passive park serving residents, students, and employees. As detailed throughout this MND implementation of the mini-park would not result in an adverse physical effect on the environment. Thus, impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

Existing Plans, Programs, or Policies

None.

Sources

City of Orange General Plan. Accessed: <https://www.cityoforange.org/391/General-Plan> (accessed July 20, 2020).

17. TRANSPORTATION. <i>Would the project:</i>		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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b)	Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c)	Substantially increase hazards due to a geometric design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d)	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Impact Analysis:

a) The proposed project would not conflict with any program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Construction

Construction equipment and staging for the well would be contained within the project site. As detailed the Section 3, *Project Description*, the project would be constructed in two phases: 1) well drilling and development and 2) well equipping and construction of the mini-park. As shown in Table T-1, the project would generate approximately 34 daily trips, including 4 trips during the AM peak hour and 4 trips during the PM peak hour during Phase 1 of construction. In addition, the project would generate approximately 80 daily trips, including 8 trips during the AM peak hour and 8 trips during the PM peak hour through Phase 2 of construction.

Table T-1: Project Trip Generation

	PCE	Vehicle Trips			PCE Trips		
		Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
Phase 1 - Well Drilling and Development							
Workers (estimated 12 workers) ¹	1.0	24	3	3	24	3	3
Steel Well Casting Trucks (5)	3.0	10	1	1	30	3	3
Concrete Delivery Trucks (9)	3.0	18	1	1	54	3	3
		34	4	4	108	9	9
Phase 2 - Well Equipping and Park Construction							
Workers (estimated 20 workers) ¹	1.0	40	5	5	40	5	5
10 Cubic Yard Dump Truck (15)	3.0	30	2	2	90	6	6
Trucks for Pipe Delivery (5)	3.0	10	1	1	30	3	3
		80	8	8	160	14	14

PCE = Passenger Car Equivalent

¹ Worker trips are assumed to be outside of the peak hours. However, it is estimated that 25 percent of workers may arrive or depart the site during the AM or PM peak commute periods.

Source: Appendix I

The maximum of 14 PCE peak hour trips over the 1.5-year construction period would be a limited increase to the existing traffic within the project vicinity that would not result in potential impacts.

Therefore, impacts related to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities from construction activities would be less than significant.

Operation

The operational phase of the proposed project would require a minimal number of new trips to the project site for well and park maintenance purposes. These trips would result in a limited increase to the existing traffic in the project vicinity that would not result in potential impacts. In addition, the passive mini-park is intended to be used by residents, students, and employees that are within walking distance of the site. The park is across the street from the transit center parking structure and may be used by commuters waiting for transit, or after transit and before work or school activities. The project does not include any parking; and therefore, does not provide for vehicle use. Therefore, minimal operational vehicle trips would occur from implementation of the project. As such, operation of the proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Thus, operational impacts would be less than significant.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) In response to Senate Bill (SB) 743 in 2013 Section 15064.3 was added to the CEQA Guidelines, which became effective on July 1, 2020. CEQA Guidelines Section 15064.3 - Determining the Significance of Transportation Impacts states that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. The City of Orange adopted VMT impact guidelines on July 14, 2020, which include the following screening thresholds:

- Transit Priority Area (TPA) Screening: Projects Located within a TPA are presumed to have a less than significant impact unless there is substantial evidence to the contrary and meet the following standards:
 - Has a Floor Area Ratio of at least 0.75;
 - Does not exceed the City of Orange parking requirements for use by residents, customers or employees of the project;
 - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Southern California Association of Governments (SCAG); and
 - Does not replace affordable residential units with a smaller number of moderate or high-income residential units.
- Low VMT Area Screening: Residential and office projects located within a low VMT-generating area (as designated by the Orange County Traffic Analysis Model) are presumed to have a less than significant impact unless there is substantial evidence to the contrary or the project proposes a land use change.
- Project Type Screening: Project types that are on the list the City of Orange has created are presumed to have a less than significant impact, unless there is substantial evidence to the contrary, due to them being locally serving in nature.

The well and passive mini-park meet the screening thresholds as they are in a TPA and are a project type that is screened out – Community Institution (local government) and local park. As described above, the project would result in a limited increase in vehicle trips during the temporary construction process. During operation, the well system and mini-park would require only periodic maintenance visits to the site by City staff, which would not increase daily VMT and would be less than the 110 daily trip threshold. In addition, the project supports the use of transit as the proposed mini-park is across the street from the transit center parking structure and may be used by commuters waiting for transit, or after transit and before work or school activities. Further, the project does not include any parking; and therefore, does not provide for vehicle use. Therefore, the project would not result in increased long-term VMT, and would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3(b)(1). No impact.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) The project includes development of a new well system and passive mini-park. The proposed project does not include the construction of a new roadway or intersection, which could be determined to be a hazardous geometric design feature. The project does not include any parking facilities. Vehicular design features are limited to a 20 foot wide driveway from Maple Avenue that would be constructed pursuant to the City’s municipal code standards. In addition, the project does not include farm equipment or other incompatible use. Thus, no impacts related to vehicular circulation design features or incompatible uses would occur from the proposed project.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

d) The proposed construction activities, including equipment and supply staging and storage, would occur within the project site and would not restrict access of emergency vehicles to the project site or adjacent areas. During construction of the project, the adjacent roadways would remain open to ensure adequate emergency access to the project site and vicinity, and impacts related to inadequate emergency access during construction activities would not occur.

The proposed project facilities would require periodic maintenance, which would be accessed from the proposed 20-foot-wide driveway from Maple Avenue. The driveway would be constructed pursuant to existing municipal code regulations, as verified through the City’s permitting process. Thus, potential impacts related to inadequate emergency access would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impacts.

Existing Plans, Programs, or Policies

None.

Sources

City of Orange Local CEQA Guidelines. Accessed:
<https://www.cityoforange.org/DocumentCenter/View/531/Local-CEQA-Guidelines-PDF?bidId=>
(accessed July 21, 2020)

OPR Technical Advisory on Evaluating Transportation Impacts in CEQA. 2018. Accessed:
https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf (accessed July 21, 2020)

<p>18. TRIBAL CULTURAL RESOURCES. <i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:</i></p>	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).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Cultural and Paleontological Resources Assessment (CUL 2020), included as Appendix B; and the Geotechnical Investigation (Geo 2019), included as Appendix D.

AB 52

The project would be required to comply with AB 52 regarding tribal consultation. Chapter 532, Statutes of 2014 (i.e., AB 52), requires that Lead Agencies evaluate a project’s potential to impact “tribal cultural resources.” Such resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the California Register or included in a local register of historical resources (PRC Section 21074). AB 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource falling outside the definition stated above nonetheless qualifies as a “tribal cultural resource.”

In compliance with this requirement, the City sent letters on July 21, 2020 to the following tribes that have previously requested notification of development projects:

- Gabrieleno Band of Mission Indians – Kizh Nation
- San Gabriel Band of Mission Indians
- Torres Martinez Desert Cahuilla Indians
- Gabrielino/Tongva Nation

In response, the Gabrieleno Band of Mission Indians – Kizh Nation submitted information stating that overall project area is associated with Old Santa Ana, the historic path of the Santa Ana River, and the Portolá Expedition in Orange County. On July 28, 1769 the expedition reached the Santa Ana River, near its turn at the mouth of the Santa Ana Canyon (probably about where Glassell Street now crosses in Orange). Local Indians came to visit the expedition’s camp with gifts of food and shell beads. In return, Captain Portolá gave them beads and cloth (OC History 2020).

Impact Analysis:

a) As detailed previously in Section 5, *Cultural Resources*, the project site is a vacant undeveloped paved site. It does not contain any known historically listed 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. Although located in the Old Towne Historic District, the site does not meet any of the historic resource criteria and does not meet the definition of an historical resource pursuant to CEQA. Therefore, the project would not result in impacts to historic resources that are listed or eligible for listing.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) As described previously in Section 5, *Cultural Resources*, review of historic aerials and topographic maps of the project site shows that the site has been previously disturbed. Also, the Geotechnical Investigation describes that onsite soils consist of up to 3 feet of artificial fill overlying Quaternary-aged older alluvial fan deposits. The potential for tribal cultural resources exists below the 3 feet of artificial fill. Construction of the well system would involve grading and excavation, to install the well infrastructure, which is beyond the 3 feet of artificial fill. On September 23, 2020, during the AB 52 consultation with Mr. Andy Salas, Chairman of the Gabrieleno Band of Mission Indians – Kizh Nation, he requested monitoring of the initial site clearing and demolition activities, spoils from well drilling of up to 15 feet, as well as earthmoving activities related to storm drain and park improvements that impact native soils beyond the 3 feet of artificial fill.

Therefore, Mitigation Measure TCR-1 has been included to provide for onsite monitoring, in addition to Native American resource sensitivity training and to prescribe activities should any inadvertent discoveries of tribal cultural resources be unearthed by project construction activities. Implementation of Mitigation Measure TCR-1 would reduce potential impacts to tribal cultural resources to a less than significant level.

Additionally, as described previously and included as PPP CUL-1, California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation. If the coroner determines that the remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Therefore, impacts related to human remains would be less than significant.

Significance Determination: Less than significant with mitigation incorporated.

Mitigation Measures:

Mitigation Measure TCR-1: Native American Monitoring. Prior to the commencement of any ground disturbing activity at the project site, the project proponent 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 following 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:

- Initial site clearing and demolition

- Initial well drilling of up to 15 feet
- Soil excavated from well drilling of up to 15 feet
- Ground disturbing activities related to storm drain and park improvements that impact native soils beyond the 3 feet of artificial fill

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 CUL MM-1.

Significance Determination After Mitigation: Less than significant impact.

Existing Plans, Programs, or Policies

PPP CUL-1: Human Remains. California Health and Safety Code Section 7050.5. Listed previously in Section 5, *Cultural Resources*.

Sources

Geotechnical Investigation, November 2019. Prepared by Sladden Engineering (Geo 2019).

OC History Land, accessed September 8, 2020. <https://www.ochistoryland.com/portola> (OC History 2020)

Phase I Environmental Site Assessment Report, March 2020. Prepared by Langan Engineering and Environmental Services, Inc., (Phase I 2020).

Cultural and Paleontological Resources Assessment, September 2020. Prepared by Cogstone (Appendix B)

19. UTILITIES/SERVICE SYSTEMS. <i>Would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(e) Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Impact Analysis:

a) The project would include construction of a well system that involves water, drainage, and electrical infrastructure as described in the project description. The impacts of development of the utility infrastructure are considered part of the impacts of the proposed project as a whole and are analyzed throughout the various sections of this MND. For example, activities such as excavation and equipment installation as required for the new well facility are analyzed in the Air Quality, Greenhouse Gas Emissions, Noise, and Transportation Sections of this MND. As detailed throughout this MND implementation of the new utility infrastructure would not result in an adverse physical effect on the environment. Thus, impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

b) The City's Urban Water Management Plan describes that the City relies on 70 percent groundwater, 25.9 percent imported water, and 4.1 percent recycled water. As detailed on Table UT-1, the City's UWMP shows that the anticipated production of groundwater would increase by 1,050 acre-feet between 2020 and 2040, which would be sufficient during both normal years and multiple dry year conditions to meet all of the City's estimated needs.

Table UT-1: City of Orange Projected Water Supply Projections (acre-feet)

Source	2020	2025	2030	2035	2040	2040 Percentage
OC Groundwater Basin	19,600	20,650	20,650	20,650	20,650	70.0%
Imported/Purchased	7,200	7,650	7,650	7,650	7,650	25.9%
Recycled	1,200	1,200	1,200	1,200	1,200	4.1%
Total	28,000	29,500	29,500	29,500	29,500	100%

Source: 2015 UWMP.

The proposed project would not generate a need for substantial amounts of water. A small volume of water would be required for landscape irrigation within the mini-park; however, this quantity of water is

minimal and can be served by the City’s existing water supply. In addition, the new well would provide infrastructure redundancy and does not generate an additional demand for water. Therefore, impacts related to water supplies from the proposed project would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) During construction, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No employees would be permanently stationed at the site, and the proposed mini-park and well facility does not include restrooms. Thus, operation of the proposed project would not generate wastewater and would not impact existing wastewater treatment facilities.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

d) The landfills that serve the City of Orange include Prima Deshecha Landfill in San Juan Capistrano, the Olinda Alpha Sanitary Landfill in Brea, and the Frank R. Bowerman Landfill in Irvine. The Orange County Integrated Waste Management Department (IWMD) owns and operates these landfills. Information regarding these landfills is detailed on Table U-3 below. The landfills have a combined total daily disposal availability of 6,600 tons per day.

Table UT-2: Landfill Capacity

Name	Max Daily Permitted	Estimated Daily Disposal	Available Daily Disposal	Closure Date
Prima Deshecha Landfill	4,000 tpd	1,400 tpd	2,600 tpd	12/31/2067
Olinda Alpha Sanitary Landfill	8,000 tpd	7,000 tpd	1,000 tpd	12/31/2021
Frank R. Bowerman Landfill	11,500 tpd	8,500 tpd	3,000 tpd	12/31/2053
<i>Prima Deshecha:</i> https://www2.calrecycle.ca.gov/PublicNotices/Details/3656 <i>Olinda:</i> https://www2.calrecycle.ca.gov/swfacilities/Directory/30-AB-0035/Inspection/356942 <i>Bowerman:</i> https://www2.calrecycle.ca.gov/SWFacilities/Directory/30-AB-0360/Detail				

Construction and implementation of the proposed project is not anticipated to generate substantial amounts of solid waste. The proposed project would generate solid waste from construction and demolition debris during the short-term construction period. The demolition phase of construction involves removal of asphalt and base currently covering the lot. Soil and solid wastes would be disposed in accordance with local solid waste disposal requirements. However, Section 5.408.1 of the existing CalGreen Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste (included as PPP SW-1). Thus, the demolition and construction solid waste that would be disposed of at the landfill would be approximately 25 percent of the waste generated. As listed in Table UT-2 the landfills have a combined total daily disposal availability of 6,600 tons per day, which would meet the construction related landfill needs.

In addition, operational waste would be limited to waste generated from maintenance of the proposed facilities and trash left on the project site. This volume of waste is anticipated to be minimal and would be recycled in compliance with state recycling requirements. Therefore, implementation of the proposed

project would result in less than significant impacts on landfill capacity and impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

e) The proposed project would comply with all regulations related to solid waste. Beginning in 2020 all construction would be required to divert 65 percent of construction waste and operations of development would be required to divert 75 percent of solid waste pursuant to state regulations. Implementation of the proposed project would be required to be consistent with all mandatory federal, state and County regulations related to solid waste. Therefore, impacts related to compliance with solid waste regulations would not occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Sources:

City of Orange General Plan Infrastructure Element. Accessed:

<https://www.cityoforange.org/DocumentCenter/View/568/General-Plan---Infrastructure-Element-PDF> (accessed July 21, 2020).

OCS Design and Construction Requirements for Sanitary Sewers. Accessed

<https://www.ocsd.com/Home/ShowDocument?id=28159> (accessed July 21, 2020).

The Integrated Waste Management Act. Accessed:

<https://www.calrecycle.ca.gov/lgcentral/enforcement> (accessed July 21, 2020).

20. WILDFIRE. <i>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Impact Analysis:

a) The project site is developed and within an urbanized residential, commercial, and industrial area of the City of Orange. The project site is surrounded by developed and urban areas. The project site is not adjacent to any wildland areas. According to the CAL FIRE Hazard Severity Zone map, the project site is not within a fire hazard zone. Construction activities would not interfere with emergency response access to the project vicinity. In addition, because the project is required to comply with all applicable City codes, as verified by the City, potential impacts related to an emergency response or evacuation would not occur.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

b) The project site is developed and within an urbanized residential area of the City of Orange. The project site is surrounded by developed and urban areas. The project site is not adjacent to any wildland areas, and as determined by the CAL FIRE Hazard Severity Zone map, the project site is not within a fire hazard zone. In addition, the project site is flat and within a flat area. The site is adjacent to two roadways, industrial and residential development. There are no factors on or adjacent to the project site that would exacerbate wildfire risks. Thus, no impact related to other factors that would expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would occur from the project.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

c) As described previously, the project site is developed and within a developed and urban area that is not within a wildfire hazard zone. The project does not include any infrastructure that would exacerbate fire risks. Therefore, impacts related to infrastructure that could exacerbate fire risks would not occur within the proposed project.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

d) As described previously, the project site is developed and within a developed and urban area that is not within a wildfire hazard zone. In addition, the project site is flat and surrounded by flat areas. There are no slope or hillsides that would become unstable. Therefore, impacts related to flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would not occur from the proposed project.

Significance Determination: No impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: No impact.

Existing Plans, Programs, or Policies

None.

Sources

California Department of Forestry and Fire Protection (CAL FIRE). 2020. Fire Hazard Severity Zone Map. Accessed:

<https://forestwatch.maps.arcgis.com/apps/Styler/index.html?appid=5e96315793d445419b6c96f89ce5d153> (accessed on July 27, 2020)

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(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?)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Impact Analysis:

a) As described in Section 4, *Biological Resources*, the project site is located within an urban area and is fully paved with asphalt. No endangered, rare, threatened, or special status plant species (or associated habitats) or wildlife species designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS) occur on the site. As no sensitive species or habitats are located within the urban and developed site, implementation of the project would not reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or impact a plant or animal community.

As described in Section 5, *Cultural Resources*, the project site does not contain any buildings or structures that meet any of the California Register of Historical Resources (California Register) criteria or qualify as “historical resources” as defined by CEQA. In addition, the project would not result in significant impacts to nearby historic resources.

The Geotechnical Exploration Report describes that the onsite soils consist of up to 3 feet of artificial fill overlying Quaternary-aged older alluvial fan deposits. The potential for historic and pre-historic archaeological resources exists below a depth of 3 feet below grade of existing soils. Construction of the well system would involve grading and excavation, to install the well infrastructure, which is beyond the 3 feet of artificial fill. Thus, Mitigation Measures CUL-1 has been included to require archaeological monitoring during all initial ground-disturbance activities, including vegetation removal, site preparation, and grading, to assess any potential for archeological resources to be uncovered at the project site. Implementation of Mitigation Measure CUL-1 would reduce potential impacts to archaeological resources to a less than significant level. Likewise, as described in Section 18, *Tribal Cultural Resources*, the site has the potential to contain tribal cultural resources exists below the 3 feet of artificial fill. Therefore, Mitigation Measure TCR-1 has been included to include monitoring of native soils and to ensure that any inadvertent discovery of potential tribal cultural resources during ground-disturbing activities would be less than significant.

Significance Determination: Less than significant with mitigation incorporated.

Mitigation Measures: As listed in Section 5, *Cultural Resources* and Section 18, *Tribal Cultural Resources*

Significance Determination After Mitigation: Less than significant impact.

b) Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. CEQA Guidelines, Section 15130 (a) and (b), states:

- (a) Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.
- (b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.

The project site is currently fully paved with asphalt and is located in an urban area. The project would redevelop the site for a new well system and passive mini-park, which is consistent with the Public Institution (P-I) zoning designation of the project site. The new well infrastructure is consistent with the planned water facilities that are described in both the Santa Fe Depot Specific Plan and the Chapman University Specific Plan. In addition, the project would not extend new infrastructure into unserved areas or other such improvements that could lead to cumulative impacts. The new mini-park is anticipated to be used by existing residents, Chapman University students, and local employees. The mini-park is not anticipated to result in new development or combine with other development, in a manner that could result in cumulative impacts.

Also, as detailed herein, all of the other potential impacts related to implementation of the project would be less than significant or reduced to a less than significant level with implementation of mitigation measures. In addition, the cumulative effect of the project is limited, due to the small scale of the project on land that has been previously disturbed and is zoned for urban uses. The project would rely on, and can be accommodated by the existing road system, public services, and utilities. Thus, impacts to environmental resources or issue areas would not be cumulatively considerable; and cumulative impacts would be less than significant.

Significance Determination: Less than significant impact.

Mitigation Measures: No mitigation measures are required.

Significance Determination After Mitigation: Less than significant impact.

c) The project proposes redevelopment of the project site for new well system and passive mini-park. As described previously, the project site is within an urban area and surrounded by consistent land uses. The project would not consist of any use or any activities that would result in a substantial negative affect on persons in the vicinity. All resource topics associated with human beings and the proposed project have been analyzed in accordance with CEQA and the State CEQA Guidelines and were found to pose no impacts or less-than-significant impacts with implementation of existing plans, programs, or policies, or mitigation measures. Upon implementation of mitigation measures, the proposed project would not have the potential to result in substantial adverse impacts on human beings either directly or indirectly. .

Significance Determination: Less than significant with mitigation incorporated.

Mitigation Measures: CR-1, PAL-1, and TR-1, as listed previously.

Significance Determination After Mitigation: Less than significant impact.

Existing Plans, Programs, or Policies

As listed in previous responses.

REFERENCES

California Department of Conservation (DOC) Important Farmland Finder, 2020. Accessed: <https://maps.conservation.ca.gov/dlrp/ciff/> (accessed July 16, 2020).

California's Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDDB). Accessed: <https://wildlife.ca.gov/Data/CNDDDB> (accessed July 16, 2020)

California's Department of Fish and Wildlife (CDFW) Species Explorer. Accessed: <https://nrm.dfg.ca.gov/taxaquery/Default.aspx> (accessed July 16, 2020)

California Department of Forestry and Fire Protection (CAL FIRE). Fire Hazard Severity Zone Map. Accessed: <https://forestwatch.maps.arcgis.com/apps/Style/index.html?appid=5e96315793d445419b6c96f89ce5d153> (Accessed July 21, 2020).

California Department of Toxic Substances Control Cortese List. Accessed: <https://calepa.ca.gov/SiteCleanup/CorteseList/> (Accessed July 21, 2020).

California Department of Transportation (Caltrans). 2011. *List of eligible and officially designated State Scenic Highways*. Accessed: [http:// https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways](http://https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways) (accessed July 16, 2020).

California Geological Survey (CGS). 1994. Open File Report 94-15: Generalized Mineral Land Classification of Orange County, California. Plate 1. Accessed: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-15/OFR_94-15_Plate_1.pdf (accessed July 20, 2020)

Chapman University Specific Plan. Accessed: <https://www.cityoforange.org/DocumentCenter/View/10040/Specific-Plan-Amendment-7-Draft-dated-September-2019> (accessed July 20, 2020).

City of Orange 2015 Urban Water Management Plan. Accessed: <https://www.cityoforange.org/Archive/ViewFile/Item/171> (accessed July 17, 2020).

City of Orange General Plan. Accessed: <https://www.cityoforange.org/391/General-Plan>

City of Orange Local CEQA Guidelines. Accessed: <https://www.cityoforange.org/DocumentCenter/View/531/Local-CEQA-Guidelines-PDF?bidId=> (accessed July 21, 2020)

City of Orange Municipal Code. Accessed: https://library.municode.com/ca/orange/codes/code_of_ordinances

Federal Emergency Management Agency (FEMA). 2020. Flood Insurance Rate Map (FIRM) Map No. 06059C0161J. Accessed: <https://msc.fema.gov/portal/home>

Geotechnical Exploration Report, City of Orange Well No. 28 Project, 235 West Maple Avenue, City of Orange, California. August 23, 2019. Tetra Tech, Inc.

OCSD Design and Construction Requirements for Sanitary Sewers. Accessed
<https://www.ocsd.com/Home/ShowDocument?id=28159> (accessed July 21, 2020).

Orange County General Plan, Chapter VI-113 Paleontology (General Areas of Sensitivity) (Figure VI-9). Amended 2012. Accessed: <https://www.ocgov.com/civicax/filebank/blobdload.aspx?blobid=8621>

OPR Technical Advisory on Evaluating Transportation Impacts in CEQA. 2018. Accessed:
https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf (accessed July 21, 2020)

Phase I Environmental Site Assessment Report, March 2020. Prepared by Langan Engineering and Environmental Services, Inc., (Phase I 2020).

Santa Fe Depot Specific Plan. Accessed:
<https://www.cityoforange.org/DocumentCenter/View/614/Santa-Fe-Depot-Specific-Plan-Update---Final-PDF> (accessed July 20, 2020).

The Integrated Waste Management Act. Accessed:
<https://www.calrecycle.ca.gov/lgcentral/enforcement> (accessed July 21, 2020).

United States Fish and Wildlife Service (USFWS). National Wetlands Inventory. Accessed:
<https://www.fws.gov/wetlands/data/mapper.html> (accessed July 16, 2020)

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