**DRAFT**

# Initial Study and Mitigated Negative Declaration

# Septic to Gravity Sewer Conversion Project

**September 2020**

**Lead Agency:**

**City of Santa Ana**
**220 S. Daisy Ave**
**Santa Ana, California 92703**

**Prepared by:**

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

**2861 Pullman Street**
**Santa Ana, California 92705**

# DRAFT MITIGATED NEGATIVE DECLARATION
# SEPTIC TO GRAVITY SEWER CONVERSION PROJECT

**Lead Agency:** City of Santa Ana

**Project Proponent:** City of Santa Ana

**Project Location:** The project site is located in the Pasadena Street, Medford Avenue, and Deodar Street neighborhood within the City of Santa Ana.

**Project Description:** The proposed Project involves installing sewer mains and laterals to help transfer existing residences from septic systems to the City's sewer system. The Project would install approximately 670 linear feet (LF) of 8-inch sewer main and 4-inch laterals within Pasadena and Medford Avenue from Deodar Street to the west. The Project also replaces the outdated 6" water main and laterals within Deodar Street, Medford Avenue, and Pasadena Avenue. The proposed 8" water main would connect at 17th Street approximately 210' west of Deodar Street, install 1420 LF of 8" water main at Deodar Street, and install an additional 670 LF in Medford and Pasadena Avenue. The Project would install a total of 2,300 LF of 8" water main and transfer 50 properties from City of Tustin water to the City of Santa Ana. The improvements would include replacement of curb and gutter, driveways, street asphalt and other infrastructure where necessary.

Construction of the Proposed Project is anticipated to start in 2021 with an approximate duration of nine months. Construction of the sewer and water improvements would occur concurrently.

**Public Review Period:** October 23, 2020 to November 21, 2020

**Mitigation Measures Incorporated into the Project to Avoid Significant Effects:**

**Geology and Soils**

**GEO-1: Unanticipated Discovery – Paleontological Resource.** If paleontological resources (i.e., fossil remains) are discovered during excavation activities, the contractor will notify the City and cease excavation within 100 feet of the find until a qualified paleontological professional can provide an evaluation of the site. The qualified paleontological professional will evaluate the significance of the find and recommend appropriate measures for the disposition of the site (e.g. fossil recovery, curation, data recovery, and/or monitoring). Construction activities may continue on other parts

of the construction site while evaluation and treatment of the paleontological resource takes place.

**Hazards and Hazardous Materials**

**HAZ-1:** **Traffic Control Plan.** Prior to construction, the City of Santa Ana (or its contractor) shall prepare a Traffic Control Plan to ensure proper access to residences and businesses in the area by emergency vehicles during construction and to maintain traffic flow. The Traffic Control Plan shall be approved by the City of Santa Ana prior to any lane closures.

**Noise**

**NOI-1**: The Project construction and improvement plans will include the following requirements for construction activities:

- Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise attenuation devices.
- A sign, legible at a distance of 50 feet, shall be posted at the Project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address any construction noise concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator.
- Identification of construction noise reduction methods. These reduction methods may include shutting off idling equipment (5 minutes), installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and using electric air compressors and similar power tools.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.
- Per Section 18-314of the City's Municipal Code, construction shall be prohibited between the hours of 8:00 p.m. and 7:00 a.m. on weekdays or Saturday, or any time on Sunday or federal holidays

**NOI-2:** In order to reduce construction noise, during the demolition, site preparation, trenching, painting and paving phases, a temporary noise barrier or enclosure should be positioned between Project construction and the residences in a manner that breaks the line of sight between the construction equipment and these residences to the extent feasible. The composition, length,

height, and location of noise control barrier walls should be adequate to assure proper acoustical performance and withstand structural failure.

**Tribal Cultural Resources**

**TCR-1: Retain a Native American Monitor/Consultant**: The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both ancestrally affiliated with the project area and approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the Native American Heritage Commission's (NAHC) Tribal Contact list for the area of the project location. This list is provided by the NAHC. A Native American monitor shall be retained by the Lead Agency or owner of the project to be on site to monitor all project-related, ground-disturbing construction activities (i.e., boring, grading, excavation, potholing, trenching, etc.). A monitor associated with one of the NAHC recognized Tribal governments which have commented on the project shall provide the Native American monitor. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.

**TCR-2: Unanticipated Discovery of Tribal Cultural and Archaeological Resources**: Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources.

**TCR-3: Public Resources Code Sections 21083.2(b) for unique archaeological resources.** Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. All Tribal Cultural

Resources shall be returned to the Tribe. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe or a local school or historical society in the area for educational purposes.

**TCR-4: Unanticipated Discovery of Human Remains and Associated Funerary Objects**: Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC and PRC 5097.98 shall be followed.

**TCR-5: Resource Assessment & Continuation of Work Protocol**: Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

**TCR-6: Kizh-Gabrieleno Procedures for burials and funerary remains:** If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

**TCR-7: Treatment Measures:** Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour

guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

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## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AB | Assembly Bill |
| AQMP | Air Quality Management Plan |
| BMPs | Best Management Practices |
| CalEEMod | California Emissions Estimator Model |
| Caltrans | California Department of Transportation |
| CARB | California Air Resources Board |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| $CH_4$ | Methane |
| CO | Carbon Monoxide |
| $CO_2$ | Carbon Dioxide |
| $CO_2e$ | Carbon Dioxide Equivalent |
| CO Plan | Federal Attainment Plan for Carbon Monoxide |
| CRHR | California Register of Historic Places |
| CWA | California Water Act |
| DTSC | Department of Toxic Substances Control |
| EIC | Eastern Information Center |
| EIR | Environmental Impact Report |
| EPA | Environmental Protection Agency |
| FEIR | Final Environmental Impact Report |
| FEMA | Federal Emergency Management Agency |
| FIRM | Flood Insurance Rate Map |
| GHGs | Greenhouse Gases |
| LSTs | Localized Significance Thresholds |
| MBTA | Migratory Bird Treaty Act |
| MLD | Most Likely Descendent |
| MMT | Million Metric Tons |
| MND | Mitigated Negative Declaration |
| MSHCP | Multiple Species Habitat Conservation Plan |
| $MTCO_2eq$ | Metric Tons of Carbon Dioxide Equivalent |
| NAHC | Native American Heritage Commission |
| ND | Negative Declaration |
| NPDES | National Pollutant Discharge Elimination System |
| $N_2O$ | Nitrous Oxide |
| $NO_x$ | Nitrogen Oxides |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| OHV | Off-Highway Vehicle |
| OPR | California Office of Planning and Research |

| | |
|---|---|
| $PM_{10}$ and $PM_{2.5}$ | Particulate Matter |
| RCPG | Regional Comprehensive Plan and Guide |
| ROG | Reactive Organic Gases |
| RTP | Regional Transportation Plan |
| RWQCB | Regional Water Quality Control Board |
| USACE | United States Army Corps of Engineers |
| SCAG | Southern California Association of Governments |
| SCAQMD | South Coast Air Quality Management District |
| SCS | Sustainable Communities Strategy |
| SIP | State Implementation Plan |
| SP | Service Population |
| SoCAB | South Coast Air Basin |
| SR | State Route |
| SRA | Sensitive Receptor Area |
| SWPPP | Storm Water Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |

# SECTION 1.0 BACKGROUND

## 1.1 Summary

| | |
|---|---|
| **Project Title:** | Septic to Gravity Sewer Conversion Project |
| **Lead Agency Name and Address:** | City of Santa Ana Public Works Agency<br>20 Civic Center Plaza<br>Ross Annex, M-20<br>Santa Ana, CA 92702 |
| **Contact Person and Phone Number:** | Armando Fernandez, P.E.<br>Senior Civil Engineer<br>Water Resources Division<br>City of Santa Ana<br>(714) 647-3379 |
| **Project Location:** | The project site is located in Pasadena Street, Medford Avenue, Deodar Street, and 17th Street within the City of Santa Ana (Figures 1 and 2). |
| **General Plan Designation:** | Public Right-of-Way (ROW) and Suburban Residential (1-B) |
| **Zoning:** | Public Right-of-Way |

## 1.2 Introduction

The City of Santa Ana is the Lead Agency for this Initial Study. The Initial Study has been prepared to identify and assess the anticipated environmental impacts of the Septic to Gravity Sewer Conversion Project (Proposed Project). This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Pub. Res. Code, Section 21000 *et seq.*) and State CEQA Guidelines (14 CCR 15000 *et seq.*). CEQA requires that all state and local government agencies consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA Initial Study is generally used to determine which CEQA document is appropriate for a Project (Negative Declaration [ND], Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]).

## 1.3 Surrounding Land Uses/Environmental Setting

The Proposed Project is located in the Pasadena Street, Medford Avenue, and Deodar Street neighborhood within the City of Santa Ana (Figure 1 and 2). The project area is characterized by residential and commercial land uses (Appendix A. Project Site Photos). Surrounding land uses are described in Table 1-1 below.

**Table 1-1. Surrounding Land Uses**

| Title | General Plan Designation | Existing Land Use |
|---|---|---|
| Project Site | Public ROW, Suburban Residential (1B)[1] | Single and Multi-Family Residential, Commercial |
| North | Low-Density Residential (LR-7)[2] | Single and Multi-Family Residential |
| East | Suburban Residential (1B)[1] | Single-Family Residential |
| South | General Commercial (GC)[2] | Commercial |
| West | General Commercial (GC)[2] | Commercial, Multi-Family Residential |

*Source: 1 – Orange County 2015, 2 – City of Santa Ana 2018*


Location: N:\2019\2019-025 Santa Ana Septic to Sewer\MAPS\Location_Vicinity\SA_Septic_to_Sewer_Vicinity.mxd (AA)-mguidry 10/23/2020

Map Date: 6/3/2019

*Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community*

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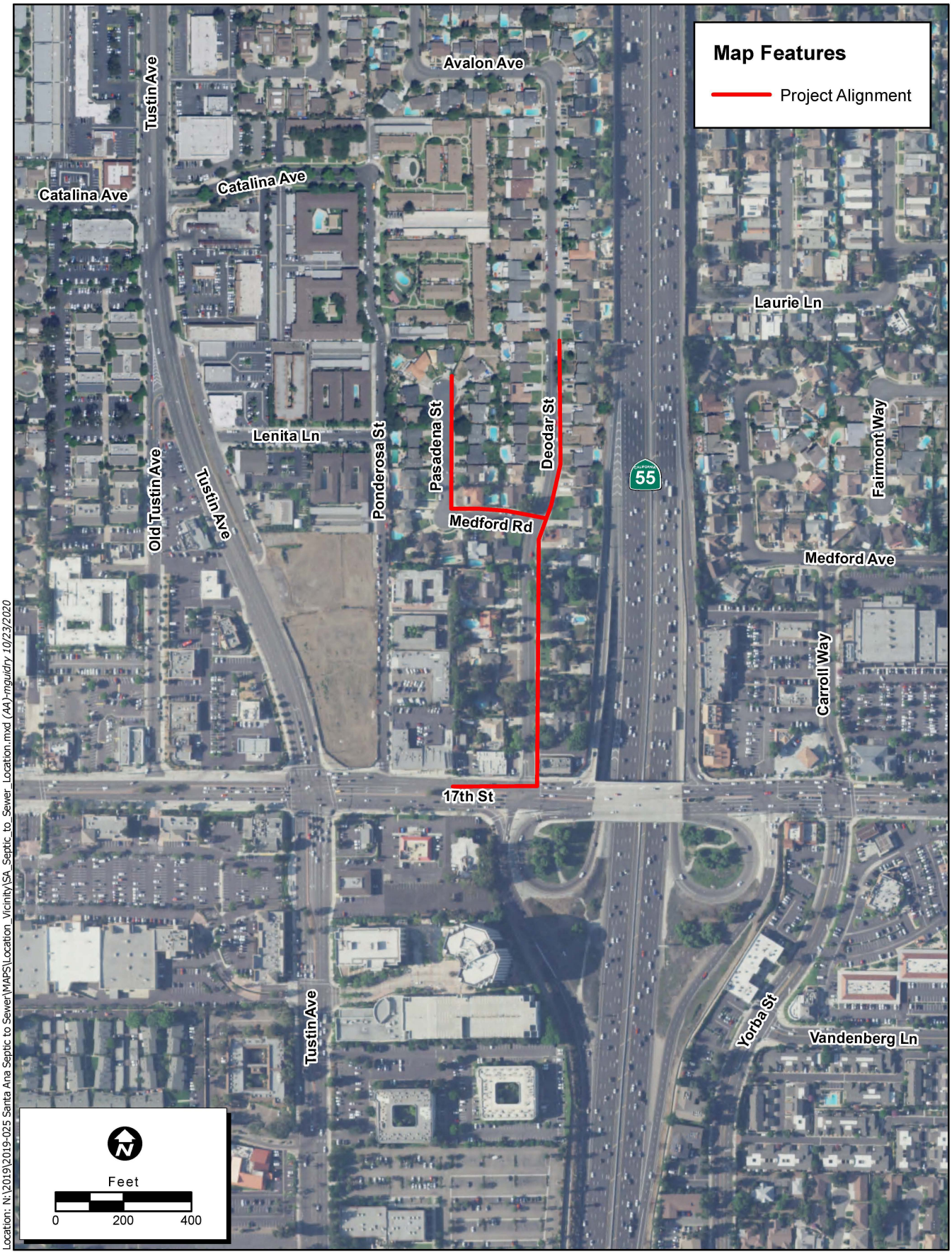
**Figure 1. Regional Project Location**

*2019-025 Santa Ana Septic to Sewer Conversion Project*




Location: N:\2019\2019-025 Santa Ana Septic to Sewer\MAPS\Location_Vicinity\SA_Septic_to_Sewer_Location.mxd (A4)-mguidry 10/23/2020

Map Date: 9/16/2020

*Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community*

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**Figure 2. Project Location**

*2019-025 Santa Ana Septic to Sewer Conversion Project*

# SECTION 2.0 PROJECT DESCRIPTION

## 2.1 Project Characteristics

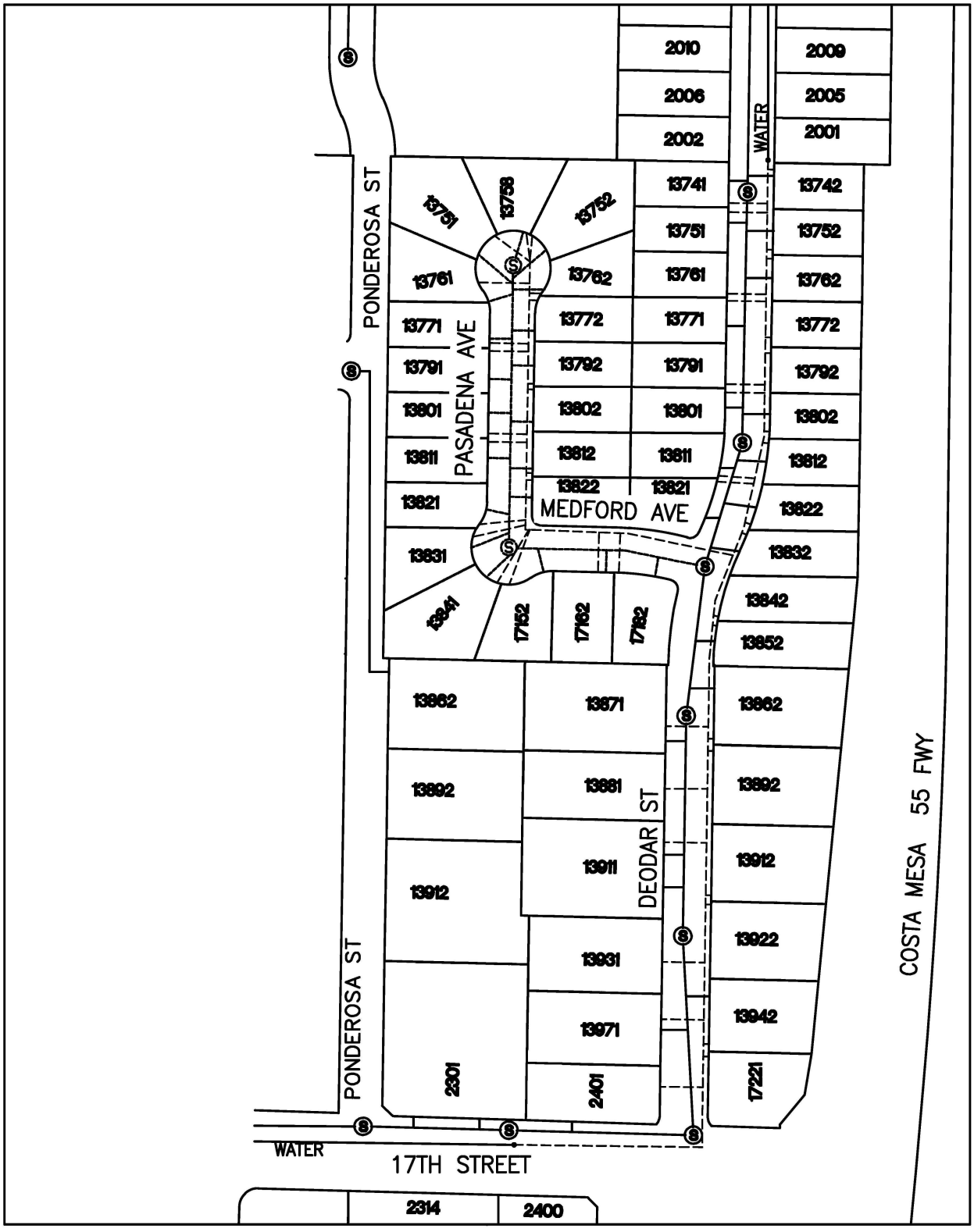
**Septic to Sewer Conversion.** The proposed Project involves installing sewer mains and laterals to help transfer existing residences from septic systems to the City's sewer system. The Project would install approximately 670 LF of 8-inch sewer main within Pasadena and Medford Avenue from Deodar Street to the west. This segment would also include the installation of twenty 4" sewer laterals, two new 48-inch sewer manholes, and modifications to one 48-inch sewer manhole. The Project would also install eight additional 4" sewer laterals on Deodar Street. The Project would assist homeowners with the transferring of the private side connection to the public sewer main at all 28 residential properties. Please see Figure 3 for a site plan of the proposed sewer improvements.

**Water Service.** The proposed Project also replaces the outdated 6" water main and laterals within 17th Street, Deodar Street, Medford Avenue, and Pasadena Avenue. The proposed 8" water main would connect at 17th Street approximately 210' west of Deodar Street, install 1420 linear feet of 8" water main at Deodar Street, and install an additional 670 LF in Medford and Pasadena Avenue. The Project would install a total of 2300 LF of 8" water main and transfer 50 properties from City of Tustin water to the City of Santa Ana. Please see Figure 3 for a site plan of the proposed water service improvements.

The sewer and water improvements would also include replacement of curb and gutter, driveways, street asphalt and other infrastructure where necessary.

## 2.2 Project Timing

Construction of the Proposed Project is anticipated to start in 2021 with an approximate duration of nine months. Construction of the sewer and water improvements would occur concurrently.




| LEGEND | |
|---|---|
| —— | EXISTING SEWER AND WATER SYSTEM |
| —— | PROPOSED SEWER SYSTEM |
| - - - - | PROPOSED WATER SYSTEM |

Map Date: 7/31/2020

**Figure 3. Site Plan**

*2019-025 Septic to Gravity Sewer Conversion Project*

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## 2.3 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project:

- City of Santa Ana CIP No. 309095.04

## 2.4 Consultation with California Native American Tribe(s)

On December 12, 2019, the City of Santa Ana sent project notification letters to 16 California Native American tribal representatives, which had previously submitted general consultation request letters pursuant to 21080.3.1(d) of the Public Resources Code. A full list of the notified tribes is provided in Section 4.18 of this Initial Study. The Gabrieleno Band of Mission Indians – Kizh Nation have requested consultation pursuant to Public Resources Code section 21080.3.1. Ultimately, the City and tribe have agreed to specific mitigation measures for tribal cultural resources. At this time, the consultation remains ongoing for further dialogue. A summary of the consultation process, including the determination of significance of impacts to tribal cultural resources, is provided in Section 4.18 of this Initial Study. Documentation of the consultation is included in Appendix E.

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# SECTION 3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

## 3.1 Environmental Factors Potentially Affected

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

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

### Determination

On the basis of this initial evaluation:

| | |
|---|---|
| I find that the Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. | ☐ |
| I find that although the 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. | ☒ |
| I find that the Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. | ☐ |
| I find that the 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. | ☐ |
| I find that although the 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 Project, nothing further is required. | ☐ |

Armando Fernandez, P.E.
Senior Civil Engineer
Water Resources Division

Date

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# SECTION 4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

## 4.1 Aesthetics

### *4.1.1 Environmental Setting*

#### Visual Character of the Project Site

The project site is located in unincorporated Orange County within the City of Santa Ana Sphere of Influence (Figure 1 and 2). The City is Santa Ana is largely built out with a few remaining open spaces. The visual character is defined by an established residential neighborhood with adjacent small commercial retail uses. Medford Avenue and Pasadena Street are adjoined by single-family residential dwellings.

#### State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view. The project site is located approximately 0.1 miles west of State Route 55 (Costa Mesa Freeway) and approximately one-mile northeast of Interstate 5 (I-5) (Santa Ana Freeway). Neither of these highways are designated as a State Scenic Highway by Caltrans (Caltrans 2019). There are no County-designated scenic highways within the City of Santa Ana.

### *4.1.2 Aesthetics (I) Environmental Checklist and Discussion*

| **Except as provided in Public Resources Code Section 21099, would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project involves installing sewer mains, a water main, and laterals; and transferring existing residences and business from septic systems to the City's sewer system. All public improvements would occur within the existing ROW of Medford Avenue, Pasadena Street, Deodar Street and 17th Street and would be located below ground surface level. Additionally, there are no designated scenic vistas in the vicinity of the project. No impact would occur.

| **Except as provided in Public Resources Code Section 21099, would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project would be located primarily within public ROW and residential areas approximately 0.1 miles west of SR-55 and approximately one-mile northeast of I-5. Neither of these highways are designated as a State Scenic Highway by Caltrans. The nearest State Scenic Highway to the project site is a portion of SR-91 which runs from SR-55 to east of the Anaheim city limit, located approximately 6 miles to the north (Caltrans 2019). No impact would occur.

| **Except as provided in Public Resources Code Section 21099, would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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 and other regulations governing scenic quality? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project is located in an urban developed area characterized by residential and commercial land uses. All proposed improvements would be located below ground or at ground level within existing paved roads. Once construction is complete project areas would be paved and returned to the pre-project condition. Therefore, the Proposed Project would not affect the existing visual character or quality of the site and its surroundings. Because there are no designated scenic views in the vicinity, the Proposed Project would not conflict with zoning or scenic quality regulations. No impact would occur.

| **Except as provided in Public Resources Code Section 21099, would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project would not require lighting or include sources of glare during construction or operation. No impact would occur.

### *4.1.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.2 Agriculture and Forestry Resources

### *4.2.1 Environmental Setting*

The land use designation for the project site is Public ROW and Suburban Residential (Orange County 2015). The areas surrounding the project site are zoned for Low-Density Residential, Suburban Residential,

and General Commercial (City of Santa Ana 2018). According to the California Department of Conservation (CDC) *Orange County Important Farmland 2016*, the project site is located on land designated as Urban and Built-Up Land (CDC 2016).

### *4.2.2 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion*

| **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? | ☐ | ☐ | ☐ | ☒ |

According to the Orange County Important Farmland Map, the project site is located on land classified as Urban and Built-Up Land. Therefore, the Proposed Project would not be located on land classified as prime farmland, unique farmland, or farmland of statewide importance (CDC 2016). No impact would occur.

| **Would the Project:** | | Potentially Significant Impact | Less than Significant With Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| b) | Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |

The project site is not located on land zoned for agricultural use. According to the Orange County Important Farmland Map, the project site is mapped as Urban and Built-Up Land and not an agricultural preserve subject to a Williamson Act contract (CDC 2016). The Proposed Project would not conflict with zoning for agricultural use or a Williamson Act contract. No impact would occur.

| **Would the Project:** | | Potentially Significant Impact | Less than Significant With Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| 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))? | ☐ | ☐ | ☐ | ☒ |

The project site is located on land designated for Public ROW and Suburban Residential (Orange County 2015). The project site is not located on land designated for forest land, timberland, or timberland zoned timberland production. No impact would occur.

| **Would the project:** | | Potentially Significant Impact | Less than Significant With Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| d) | Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |

The project site is not zoned for forest land, timberland, or timberland production (Orange County 2015). Therefore, the Proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

| **Would the project:** | | Potentially Significant Impact | Less than Significant With Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| e) | Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |

The project site and surrounding properties are not currently designated for agriculture. The project site areas to the north, east, south, and west are located on land designated as Urban and Built-Up Land (CDC 2016). Development on the project site would not result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

### *4.2.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.3 Air Quality

### *4.3.1 Environmental Setting*

The project area is located within Santa Ana. The California Air Resource Board (CARB) has divided California into regional air basins according to topographic features. Santa Ana and the project area are located in a region identified as the South Coast Air Basin (SoCAB). The SoCAB occupies the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The air basin is on a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean on the southwest, with high mountains forming the remainder of the perimeter. The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern

California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

Both the U.S. Environmental Protection Agency (USEPA) and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone ($O_3$) [$O_3$ precursor emissions include nitrogen oxide ($NO_x$) and reactive organic gases (ROG)], carbon monoxide (CO), particulate matter (PM), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The SoCAB region is designated as a nonattainment area for the federal $O_3$ and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for $O_3$, $PM_{10}$, and $PM_{2.5.}$

The local air quality agency affecting the SoCAB is the South Coast Air Quality Management District (SCAQMD), which is charged with the responsibility of implementing air quality programs and ensuring that national and state ambient air quality standards are not exceeded and that air quality conditions are maintained in the SoCAB. In an attempt to achieve national and state ambient air quality standards and maintain air quality, the air district has completed the several air quality attainment plans and reports, which together constitute the State Implementation Plan (SIP) for the portion of the SoCAB encompassing the Project.

### *4.3.2 Air Quality (III) Environmental Checklist and Discussion*

| **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? | ☐ | ☐ | ☐ | ☒ |

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project site is located within the SoCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the SoCAB is in nonattainment. In order to reduce such emissions, the SCAQMD drafted the 2016 Air Quality Management Plan (AQMP). The 2016 AQMP establishes a program

of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, Southern California Association of Governments (SCAG), and the USEPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest population growth forecasts. (SCAG's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans.) The Project is subject to the SCAQMD's Air Quality Management Plan.

According to the SCAQMD, in order to determine consistency with SCAQMD's air quality planning two main criteria must be addressed.

**Criterion 1:**

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

a) *Would the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations?*

As shown in Table 4.3-1 and Table 4.3-2 below, the Proposed Project would result in emissions that would be below the SCAQMD regional and localized thresholds during construction. Operations of the Project would not result in the production of any on-site or off-site emissions. Therefore, the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations and would not have the potential to cause or affect a violation of the ambient air quality standards.

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

As shown in Table 4.3-1, the Proposed Project would be below the SCAQMD regional thresholds for construction. Operations of the Project would not result in the production of any on-site or off-site emissions. Because the Project would result in less than significant regional emission impacts, it would not delay the timely attainment of air quality standards or AQMP emissions reductions.

**Criterion 2:**

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

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the 2016 AQMP?*

A project is consistent with regional air quality planning efforts in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the SCAQMD air quality plans. Generally, three sources of data form the basis for the projections of air pollutant emissions in Santa Ana. Specifically, SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan and Guide* (*RCPG*) provides regional population forecasts for the region and SCAG's *2016 Regional Transportation Plan/Sustainable Communities Strategy* (*RTP/SCS*) provides socioeconomic forecast projections of regional population growth. The Santa Ana General Plan is referenced by SCAG in order to assist forecasting future growth in Santa Ana.

The Project proposes to install sewer mains, water mains and laterals to existing residences and businesses. It does not involve the development of new housing or employment centers. As such, the Project would not be contributing to an increase in population, housing or employment growth. Therefore, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by SCAQMD to develop the 2016 AQMP.

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

In order to further reduce emissions, the Project would be required to comply with emission reduction measures promulgated by the SCAQMD, such as SCAQMD Rules 402, 403, and 1113, which are directly applicable to construction projects. SCAQMD Rule 402 prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce $PM_{10}$ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories. As such, the Proposed Project meets this consistency criterion.

*c) Would the project be consistent with the land use planning strategies set forth by SCAQMD air quality planning efforts?*

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Proposed Project would not be contributing to development density and therefore would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP.

In conclusion, the determination of 2016 AQMP consistency is primarily concerned with the long-term influence of a project on air quality. Once built, the Project would not be a source of operational air

pollution. The Proposed Project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. The Proposed Project's long-term influence would also be consistent with the goals and policies of the SCAQMD's 2016 AQMP.

For these reasons, no impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant With Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☒ | ☐ |

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

**Construction Emission Impacts**

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in Table 4.3-1. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance. Construction activities would be subject to SCAQMD Rule 403, which requires taking reasonable precautions to prevent the emissions of fugitive dust, such as using water or chemicals, where possible, for control of dust during the clearing of land and other construction activities.

**Table 4.3-1. Construction-Related Emissions (Regional Significance Analysis)**

| Construction Year | Pollutant (pounds per day) | | | | | |
|---|---|---|---|---|---|---|
| | ROG | $NO_X$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Construction in 2021 | 2.08 | 43.07 | 14.78 | 0.10 | 2.87 | 1.18 |
| *SCAQMD Regional Significance Threshold* | *75* | *100* | *550* | *150* | *150* | *55* |
| **Exceed SCAQMD Threshold?** | **No** | **No** | **No** | **No** | **No** | **No** |

*Source: CalEEMod version 2016.3.2. Refer to **Attachment A** for Model Data Outputs.*

*Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; washing equipment tires before leaving the construction site; water exposed surfaces three times daily; water all haul roads twice*

| Table 4.3-1. Construction-Related Emissions (Regional Significance Analysis) | | | | | | |
|---|---|---|---|---|---|---|
| Construction Year | Pollutant (pounds per day) | | | | | |
| | ROG | $NO_X$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |

*daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied.*

*Emissions estimates account for the site preparation of 0.48 acres and the paving of 0.48 acres.*

As shown in Table 4.3-1, construction-generated emissions would not exceed the SCAQMD's significance thresholds. The SCAQMD's pollutant significance thresholds were set at emission levels tied to the region's attainment status. Therefore, since the project's emissions do not exceed SCAQMD thresholds, no exceedance of the ambient air quality standards would occur, and no health effects from project criteria pollutants would occur.

**Localized Significance Thresholds**

In addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of nitrogen dioxide ($NO_2$), CO, $PM_{10}$, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included in the LST analysis protocol). In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific level proposed projects.

LSTs represent the maximum emissions that can be generated at a Project site without expecting to cause or substantially contribute to an exceedance of the most stringent national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day.

The nearest sensitive receptors to the Project site are single-family and multi-family residence located less than 20 feet (±6 meters). Notwithstanding, the SCAQMD Methodology explicitly states: "*It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.*" Therefore, LSTs for receptors located at 25 meters were utilized in this analysis.

For this Project, the appropriate SRA for the localized significance thresholds is the Saddleback Valley source receptor area (SRA 19) as this source receptor area includes the Project site. The Proposed Project would disturb approximately 0.48-acres total during construction. Thus, the LST threshold value for a 0.48-acre site was calculated using the information provided from the LST lookup tables and is presented in Table 4.3-2.

| Table 4.3-2. Forecast of Localized Construction Emissions | | | | |
|---|---|---|---|---|
| **Construction Phase** | **Criteria Pollutant Emissions (pounds per day)** | | | |
| | **$NO_x$** | **CO** | **$PM_{10}$** | **$PM_{2.5}$** |
| Demolition | 15.32 | 12.84 | 0.72 | 0.67 |
| Site Preparation | 13.72 | 6.57 | 0.71 | 0.53 |
| Trenching | 8.21 | 10.54 | 0.45 | 0.43 |
| Paving & Painting | 8.23 | 8.89 | 0.44 | 0.41 |
| *SCAQMD Localized Emissions Threshold*<br>*Interpolated for 0.48 acres of daily disturbance* | *82.16* | *339.72* | *1.56* | *1.04* |
| **Exceed Threshold?** | **No** | **No** | **No** | **No** |

*Source: CalEEMod version 2016.3.2. Refer to **Attachment A** for Model Data Outputs.*
*Notes: The reduction/credits for construction emissions are based on measures included in CalEEMod and as required by the SCAQMD through Rule 403. This includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied.*

Table 4.3-2 shows that the emissions of localized pollutant resulting during Project implementation would not result in significant concentrations of pollutants at nearby sensitive receptors.

**Operational Emission Impacts**

Operational emissions impacts are long-term air emissions impacts that are associated with any changes in permanent use of the Project site by on-site stationary and off-site mobile sources that substantially increase emissions. The Project proposes improvements to the underground sewer and water infrastructure within the existing right-of-way. The Project would not change the permanent use of the Project site or contribute to on or off-site emissions. No long-term operational emission impacts would occur as a result of the Project.

**Localized Operational Significance Analysis**

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operations of a proposed project only if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Proposed Project does not include such uses. Therefore, in the case of the Proposed Project, the operational LST protocol is not applied.

| Would the Project: | Potentially Significant Impact | Less than Significant With Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☒ | ☐ |

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

**Construction-Generated Air Contaminants**

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of diesel particulate matter (DPM), ROG, $NO_x$, CO, and $PM_{10}$ from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. However, as shown in Table 1 the Project would not exceed SCAQMD emission thresholds. The portion of the SoCAB which encompasses the Project area is designated as a nonattainment area for federal $O_3$ and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for $O_3$, $PM_{10}$, and $PM_{2.5}$. Thus, existing these levels in the SoCAB are at unhealthy levels during certain periods.

The health effects associated with $O_3$ are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in $O_3$ precursor emissions (ROG or $NO_3$) in excess of the SCAQMD thresholds, the Project is not anticipated to substantially contribute to regional $O_3$ concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SCAQMD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter ($PM_{10}$ and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite

construction-related daily emissions of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 0.67 pounds per day during construction activities (see Attachment A). ($PM_{2.5}$ exhaust is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., $PM_{2.5}$). Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) As with $O_3$ and CO, the Project would not generate emissions of $PM_{10}$ or $PM_{2.5}$ that would exceed the SCAQMD's thresholds. Additionally, the Project would be required to comply with SCAQMD Rule 403, which limits the amount of fugitive dust generated during construction. Accordingly, the Project's $PM_{10}$ and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics. Thus, the Project would not result in a potentially significant contribution to regional or localized concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Furthermore, the Project has been evaluated against the SCAQMD's LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative and can be used to assist lead agencies in analyzing localized impacts associated with Project-specific level of proposed projects. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. The Environmental Justice Program is divided into three categories, with the LST protocol promulgated under Category I: Further-Reduced Health Risk. As shown in Table 4.3-2, the emissions of pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Thus, the fact that onsite Project construction emissions would be generated at rates below the LSTs for $NO_x$, CO, $PM_{10}$, and $PM_{2.5}$ demonstrates that the Project would likely not adversely impact nearby sensitive receptors.

**Operational Air Contaminants**

The Proposed Project involves 2,970 total linear feet of infrastructure improvements for the benefit of residences and businesses located in Santa Ana. It does not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable air toxic emissions from Project operations.

*Carbon Monoxide Hot Spots*

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly

more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County can be used to demonstrate the potential for CO exceedances. The SCAQMD CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

The Proposed Project would not generate any vehicle trips once construction is complete. As such, it would not increase traffic volumes at any intersection to more than 100,000 vehicles per day. There is no likelihood of the Project traffic exceeding CO values.

| **Would the Project:** | Potentially Significant Impact | Less than Significant With Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | ☐ | ☐ | ☐ | ☒ |

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

**Construction**

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area.

**Operations**

According to the SCAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified by the SCAQMD as being associated with odors. No impact would occur.

### *4.3.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.4 Biological Resources

### *4.4.1 Environmental Setting*

The Proposed Project is located in the Pasadena Street, Medford Avenue, Deodar Street, and 17th Street neighborhood within the City of Santa Ana (Figure 1 and 2). The City of Santa Ana, like the project area, is almost entirely built out. The only areas in the City with natural habitat are mainly located along the Santa Ana River or Santiago Creek, which are located more than four miles away from the project site.

A database search was completed of the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Data Base (CNDDB) (CDFW 2019). The CNDDB search did not result in any records of listed or special-status plant or wildlife species directly on the project site. It should be noted that this database is not all inclusive, because species locations may not have been disclosed nor the site previously surveyed for biological resources.

### *4.4.2 Biological Resources (IV) Environmental Checklist and Discussion*

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☐ | ☒ |

As previously mentioned, the project site is located in a fully developed urban area in the Pasadena Street, Medford Avenue, Deodar Street, and 17th Street neighborhood within the City of Santa Ana. Proposed improvements would be below ground level and would be located along existing paved roads where there are no sensitive habitats. Ornamental vegetation located adjacent to the project site would not be affected by the Proposed Project. Due to the lack of habitat and the developed nature of the project area, no impacts to candidate, sensitive, or special status species are anticipated. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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 Wildlife or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☐ | ☒ |

The project area is in a fully developed area characterized by residential and commercial land uses. The project area does not support riparian habitat or other sensitive natural community. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

The project area is fully developed with streets and residential and commercial land uses. The project area does not support wetlands. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

The project site is in an urban developed area supporting mostly non-native vegetation. The project site does not represent and is not crossed by a significant wildlife movement corridor, nor does it contain significant nursery sites for native species due to the level of development and the lack of permanent water on the site. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project would be located within existing paved roadways, where there are no biological resources. Ornamental vegetation in the project area, such as street trees, would not be affected by the Proposed Project. The Proposed Project would comply with the City of Santa Ana's tree planting, maintaining, and removal ordinance (Part II, Chapter 33, Streets, Sidewalks, and Public Works, Article VII - Regulation of the Planting, Maintenance, and Removal of Trees). The ordinance prohibits various activities that may damage the City's street trees. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

The Natural Community Conservation Plan (NCCP) that covers Orange County is meant to protect habitat of candidate, sensitive, and special status species in Orange County. The NCCP has two subareas—the southern subarea and the central-coastal subarea—but the City of Santa Ana does not fall within either of these two subareas (CDFW 2013). Thus, the Proposed Project would not interfere with HCPs or NCCPs. No impact would occur.

### *4.4.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.5 Cultural Resources

### *4.5.1 Environmental Setting*

#### Cultural Resources

The analysis of cultural resources was based on a records and literature search conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on June 5, 2019 to identify previously recorded cultural resources within the project area and within a one-half-mile radius around the project area (ECORP 2019c; Appendix D). In addition, the California Historic Property Data File (HPDF) for Orange County (OHP 2012) was consulted for Santa Ana. The HPDF provides information about resources determined eligible for, or listed on, the National Register of Historic Places (NRHP) and the California Register of Historical Resources. It also provides information on resources that are California Historical Landmarks and California Points of Historical Interest.

The records search showed that a total of 6 cultural resources investigations have been conducted within the one-half-mile records search radius. The records search results show that 2 built environment cultural resources have been previously recorded within the one-half-mile records search radius: a Craftsman bungalow single family residence at 17391 E. Santa Clara Avenue (P30-161988) and Cavalry Church at 1010 N. Tustin Avenue (P30-177515). However, none of the previously recorded resources on file at the SCCIC are in or adjacent to the project area. No archaeological sites and no built environment resources have been recorded in the project area. The HPDF also lists hundreds of historic-period buildings and structures in Santa Ana. However, none of these are in the project area. Overall, the records search results show that the project area has a low potential for subsurface prehistoric and historic period archaeological material.

### *4.5.2 Cultural Resources (V) Environmental Checklist and Discussion*

| **Would the Project:** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| a) | Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | ☐ | ☐ | ☐ | ☒ |

Although there are hundreds of historic-period buildings and structures in Santa Ana, none of these are in the project area. The results of the records search indicated that no archaeological sites and no built environment resources have been recorded in the project area.

The Proposed Project would be located within a fully developed urbanized area of Orange County within the Sphere of Influence of the City of Santa Ana. Proposed improvements would be located below ground

level within existing paved streets, which have already been disturbed by previous development and construction of utilities and streets. As such, the Proposed Project would only result in ground disturbing activities in previously disturbed location. Previously disturbed areas have a low sensitivity for containing unknown historical resources.

Because there are no known historical resources within the project area and because the Proposed Project would be located within previously disturbed areas, no impact to historical resources are anticipated.

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☐ | ☐ | ☐ | ☒ |

The results of the records search and existing developed nature of the project area indicate that the archaeological sensitivity of the project area is low. As such, construction of the Proposed Project is not anticipated to encounter archaeological resources. No impact would occur.

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Disturb any human remains, including those interred outside of dedicated cemeteries? | ☐ | ☐ | ☐ | ☒ |

No formal cemeteries are located in or near the project area. Most Native American human remains are found in prehistoric archaeological sites. The records search results show that the project area has a low potential for subsurface prehistoric and historic period archaeological material. No impacts to human remains are anticipated; however, if any are encountered during ground disturbing construction activities, existing regulations (§7050.5 of the California Health and Safety Code, §5097.98 of the California Public Resources Code, and Assembly Bill 2641) are in place which detail the actions that must be taken if such discoveries are made. No impact would occur.

### *4.5.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.6 Energy

### *4.6.1 Environmental Setting*

**Introduction**

Energy consumption is analyzed in this Initial Study due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) during both the construction and long-term operational phases.

### Electricity/Natural Gas Services

Southern California Edison provides electrical services to Orange County through State-regulated public utility contracts. Southern California Edison, the largest subsidiary of Edison International, is the primary electricity supply company for much of Southern California. It provides 14 million people with electricity across a service territory of approximately 50,00 square miles.

The Southern California Gas Company provides natural gas services to the Project area. Southern California Gas services approximately 21.6 million customers, spanning roughly 20,000 square miles of California.

### Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g. of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all residential uses in Orange County from 2013 to 2017 is shown in Table 4.6-1. As indicated, the demand has slightly decreased since 2013.

**Table 4.6-1. Residential Electricity Consumption in Orange County 2013-2017**

| Year | Residential Electricity Consumption (kilowatt hours) |
|---|---|
| 2017 | 674,508,068 |
| 2016 | 666,055,969 |
| 2015 | 687,575,933 |
| 2014 | 702,753,981 |
| 2013 | 684,206,217 |

*Source: ECDMS 2019*

The natural gas consumption associated with all residential uses in Orange County from 2013 to 2017 is shown in Table 4.6-2. As indicated, the demand has slightly decreased since 2013.

**Table 4.6-2. Residential Natural Gas Consumption in Orange County 2013-2017**

| Year | Residential Natural Gas Consumption (therms) |
|---|---|
| 2017 | 343,737,901 |
| 2016 | 337,827,012 |
| 2015 | 316,917,643 |

| Year | Residential Natural Gas Consumption (therms) |
|---|---|
| 2014 | 319,182,227 |
| 2013 | 398,302,918 |

*Source: ECDMS 2019*

Total automotive fuel consumption in Orange County from 2014 to 2018 is shown in Table 4.6-3. As shown, on-road consumption has decreased and off-road consumption has increased since 2015.

**Table 4.6-3. Automotive Fuel Consumption in Orange County 2015-2019**

| Year | On-Road Fuel Consumption (gallons) | Off-Road Fuel Consumption (gallons) |
|---|---|---|
| 2019 | 1,362,039,800 | 16,317,321 |
| 2018 | 1,384,981,472 | 15,785,665 |
| 2017 | 1,412,971,800 | 15,361,357 |
| 2016 | 1,425,043,591 | 14,946,222 |
| 2015 | 1,427,024,567 | 14,394,448 |

*Source: CARB 2014*

### *4.6.2 Energy (VI) Environmental Checklist and Discussion*

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | ☐ | ☐ | ☒ | ☐ |

This impact analysis focuses on the two sources of energy that are relevant to the Proposed Project: electricity associated with the pumping of wastewater and the equipment fuel necessary for Project construction. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of electricity estimated to be consumed by the Project is quantified and compared to that consumed by residential land uses in Orange County. Similarly, the amount of fuel necessary for Project construction and is calculated and compared to that consumed in Orange County.

The analysis of electricity gas usage is based on California Emissions Estimator Model (CalEEMod) modeling conducted by ECORP Consulting (see Appendix B), which quantifies energy use for Project operations, coupled with the California Energy Commission's *Refining Estimates of Water-Related Energy Use in California* (2006). The amount of total construction-related fuel use was estimated using ratios

provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1 (2016). Energy consumption associated with the Project is summarized in Table 4.6-4.

**Table 4.6-4. Proposed Project Energy and Fuel Consumption**

| Energy Type | Annual Energy Consumed | Percentage Increase Countywide |
|---|---|---|
| Electricity Consumption[1] | 2,490 kilowatt-hours | 0.00003% |
| Vehicular Fuel Consumption | | |
| • Project Construction[2] | 18,030 gallons | 0.0012% |

*Source: [1]Electricity consumption calculated by ECORP Consulting using CalEEMod 2016.3.2 and Refining Estimates of Water-Related Energy Use in California (CEC 2006) ; [2]Climate Registry 2016*

*Notes: The Project increases in electricity consumption are compared with all of the residential buildings in Orange County in 2018, the latest data available. Electricity consumption was calculated by converting the water use estimated by CalEEMod to kilowatt-hours. This conversion can be found in "Refining Estimates of Water-Related Energy Use in California" [1.30308 Mgal (1,911 kwh/Mgal) = 2,490 kwh].*

As shown in Table 4.6-4, the increase in electricity usage as a result of the Project would constitute a negligible increase of 0.00003 percent in the typical annual electricity consumption attributed to residential uses in Orange County. Due to the relatively low increase in electricity from the Project and the implementation of energy reducing strategies, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

The Project's gasoline fuel consumption during the construction period is estimated to be 18,030 gallons of fuel, which would increase the annual construction-related gasoline fuel use in the county by 0.0012 percent during Project construction. As such, Project construction would have a nominal effect on local and regional energy supplies, especially over the long-term. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

For these reasons, this impact would be less than significant.

| **Would the Project:** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| b) | Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project is for the implementation of sewer and water service improvements within the City. It does not conflict with or obstruct a plan for renewable energy or energy efficiency. No impact would occur.

### *4.6.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.7 Geology and Soils

### *4.7.1 Environmental Setting*

#### Geomorphic Setting

The City of Santa Ana and the project site are located within the Peninsular Ranges geomorphic province. The Peninsular Ranges are a series of mountain ranges separated by long valleys formed from faults branching from the San Andreas Fault. The topographic trend is similar to the Coast Ranges but the geology is more like the Sierra Nevada, with granitic rocks intruding the older metamorphic rocks (Group Delta 2019).

#### Regional Seismicity and Fault Zones

An "active fault," according to California Department of Conservation, Division of Mines and Geology, is a fault that has indicated surface displacement within the last 11,000 years. A fault that has not shown geologic evidence of surface displacement in the last 11,000 years is considered "inactive." According to the City of Santa Ana General Plan Seismic Safety Element, there are no active, potentially active, or inactive faults within the planning area (City of Santa Ana 1982). Additionally, the project site is not located within an Alquist-Priolo Fault Hazard Zone (CDC 2019).

#### Soils

Soil types on the project site were determined using the NRCS Web Soil Survey. Soils within the project site consist of Mocho loam, 0 to 2 percent slopes, warm MAAT, MLRA 19 and San Emigdio fine sandy loam, 0 to 2 percent slopes (NRCS 2019).

### *4.7.2 Geology and Soils (VII) Environmental Checklist and Discussion*

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Directly or indirectly cause 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 | ☐ | ☐ | ☒ | ☐ |

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | | |
| ii) Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☐ | ☒ |
| iv) Landslides? | ☐ | ☐ | ☐ | ☒ |

**i)** The nearest fault to the project site is the El Modeno Fault located approximately 4.5 miles southwest of the project site (CDC 2010). The project site is not located within an Alquist-Priolo earthquake fault zone (CDC 2019). No known faults traverse the project site or are located adjacent to the project site that may rupture during seismic activity. A less than significant impact would occur.

**ii)** Just like most of southern California, in the event of an earthquake strong ground shaking is expected to occur on the project site. The Proposed Project does not propose the construction of habitable structures and therefore would not expose people or structures to strong seismic ground shaking greater than what currently exists. Sewer design and construction would comply with current building codes and standards which would reduce the risk of loss, injury, or death resulting from strong ground-shaking. Impacts would be less than significant.

**iii)** Liquefaction is a phenomenon where water-saturated granular soil loses shear strength during strong ground shaking produced by earthquakes. The loss of soil strength occurs when cyclic pore water pressure increases below the groundwater surface. Potential hazards due to liquefaction include the loss of bearing strength beneath structures, possibly causing foundation failure and/or significant settlements. The project site is not located within the liquefaction potential zone as shown on the State of California Seismic Hazard Zone Map, for the Orange Quadrangle (CDC 1998). The Proposed Project is not anticipated to directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving seismic related ground failure including liquefaction. No impact would occur.

**iv)** The Proposed Project is not located within an area designated as having a potential for earthquake-induced land sliding (CDC 1998). No impacts would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ |

Implementation of the Proposed Project would require ground-disturbing activities, such as grading, that could potentially result in soil erosion or loss of topsoil. Construction of the Proposed Project would be required to comply with the Construction General Permit, either through a waiver or through preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Best Management Practices (BMPs) included in the SWPPP would minimize soil erosion during construction. The Proposed Project's grading plan would also ensure that the proposed earthwork is conducted in a manner that prevents or reduces the potential for soil erosion. Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☒ | ☐ |

Strong ground shaking can cause settlement, lateral spreading, or subsidence by allowing sediment particles to become more tightly packed, thereby reducing pore space. The potential for a landslide, lateral spreading, liquefaction, or collapse at the project site is very low. The project site is relatively flat and does not have landslide potential. The Proposed Project would not construct habitable structures. Therefore, implementation of the Proposed Project would not contribute to or expose people or structures to substantial adverse effects associates with on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. The Proposed Project would be constructed in accordance with the findings and recommendations included in the project's geotechnical report (AESCO 2019). Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☒ | ☐ |

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. As previously stated soils within the project area are generally sandy soils. According to the Natural Resources Conservation Service Web Soil Survey, soils within the project site consist of Mocho loam, 0 to 2 percent slopes, warm MAAT, MLRA 19 and San Emigdio fine sandy loam, 0 to 2 percent slopes (NRCS 2019). Mocho Loam, 0 to 2 percent slopes has a low to moderate shrink swell potential. San Emigdio fine sandy loam, o to 2 percent slopes has a low shrink swell potential (NRCS 1978). Additionally, the Proposed Project does not propose any habitable structures; therefore, it would not create a substantial direct or indirect risk to life or property. The Proposed Project

would be constructed in accordance with the findings and recommendations included in the project's geotechnical report (AESCO 2019). Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project would install sewer mains, a water main, and laterals and transfer existing residences and business from septic systems to the City's sewer system in Pasadena Street, Medford Avenue, Deodar Street, and 17th Street. The Proposed Project would abandon approximately 32 existing septic tanks and install the private side connection to the public sewer main to serve these properties. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☒ | ☐ | ☐ |

According to the Paleontology General Areas of Sensitivity Map for Orange County, no areas within the project vicinity contain sensitive paleontological (Orange County 2013). However, the project site is situated on Young Alluvial Fan Deposits (Qyf/sa) dating to the Holocene and Late Pleistocene geologic periods (Morton and Miller 2006). This alluvium is composed of sediments derived from the San Bernardino Mountains via the Santa Ana River and from the western Santa Ana Mountains via Santiago Creek. Therefore, excavations in areas containing Pleistocene Alluvium deposits have the potential to uncover fossil vertebrate specimens.

Excavation activities associated with sewer infrastructure are anticipated to disturb native soils and could result in the unanticipated discovery of unique paleontological resources. The project would excavate to a depth of approximately 8 feet, which is likely deeper than previous disturbances because the project site lacks sewer infrastructure. In the event of an unexpected disturbance, implementation of mitigation measure GEO-1 below would ensure that potential impacts on paleontological resources or unique geological features would be less than significant.

### *4.7.3 Mitigation Measures*

**GEO-1: Unanticipated Discovery – Paleontological Resource.** If paleontological resources (i.e., fossil remains) are discovered during excavation activities, the contractor will notify the City and cease excavation within 100 feet of the find until a qualified paleontological professional can provide an

evaluation of the site. The qualified paleontological professional will evaluate the significance of the find and recommend appropriate measures for the disposition of the site (e.g. fossil recovery, curation, data recovery, and/or monitoring). Construction activities may continue on other parts of the construction site while evaluation and treatment of the paleontological resource takes place.

## 4.8 Greenhouse Gas Emissions

### *4.8.1 Environmental Setting*

Greenhouse Gas (GHG) emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. $CH_4$ traps over 25 times more heat per molecule than $CO_2$, and $N_2O$ absorbs 298 times more heat per molecule than CO2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents ($CO_2e$). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only $CO_2$ were being emitted.

The local air quality agency regulating the SoCAB is the SCAQMD, the regional air pollution control officer for the basin. To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SCAQMD staff is convening an ongoing GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that provide input to SCAQMD staff on developing the significance thresholds. On October 8, 2008, the SCAQMD released the Draft AQMD Staff CEQA GHG Significance Thresholds.

On September 28, 2010, SCAQMD Working Group Meeting #15 provided further guidance, including an interim screening level numeric "bright-line" threshold of 3,000 metric tons of CO2e annually and an efficiency-based threshold of 4.8 metric tons of $CO_2e$ per service population (defined as the people that work, study, live, patronize and/or congregate on the Project site) per year in 2020 and 3.0 metric tons of $CO_2e$ per service population per year in 2035. The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the governing board. The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions; however, these rules are currently applicable only to boilers and process heaters, forestry, and manure management projects.

### *4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion*

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ |

GHG emissions associated with the Project would be emitted during the combustion of fossil fuels during short-term construction activities as well as the pumping of wastewater during on-going operations.

**Construction-Generated Greenhouse Gas Emissions**

Table 4.8-1 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

**Table 4.8-1. Construction-Related Greenhouse Gas Emissions**

| Emissions Source | $CO_2e$ (Metric Tons/ Year) |
|---|---|
| Construction in 2021 | 183 |
| **Total** | 183 |

*Source: CalEEMod version 2016.3.2. Refer to **Attachment B** for Model Data Outputs.*

*Notes Emissions estimates account for the site preparation of 0.48 acres and the paving of 0.48 acres.*

As shown in Table 4.8-1, Project construction would result in the generation of approximately 183 metric tons of $CO_2e$ over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. The amortized construction emissions are added to the annual average operational emissions (see Table 4.8-2).

**Operational-Generated Greenhouse Gas Emissions**

Operations of the Proposed Project would result in GHG emissions, predominantly associated with the pumping of wastewater through sewer lines. Long-term operational GHG emissions attributed to the Project are identified in Table 4.8-2 and compared to SCAQMD's numeric bright-line threshold of 3,000 metric tons of $CO_2e$ annually.

**Table 4.8-2. Operational-Related Greenhouse Gas Emissions**

| Emissions Source | $CO_2e$ (Metric Tons/ Year) |
|---|---|
| Construction Emissions (amortized over the 30-year life of the Project) | 6 |
| Water & Wastewater Pumping Emissions | 9 |
| **Total Emissions** | **15** |

| Table 4.8-2. Operational-Related Greenhouse Gas Emissions | |
|---|---|
| **Emissions Source** | **$CO_2e$ (Metric Tons/ Year)** |
| *SCAQMD Threshold* | *3,000* |
| **Exceed SCAQMD Threshold?** | **No** |

*Source: CalEEMod version 2016.3.2. Refer to **Attachment B** for Model Data Outputs.*

As shown in Table 4.8-2, operational-generated emissions would not exceed the SCAQMD's numeric bright-line threshold of 3,000 metric tons of $CO_2e$ annually. SCAQMD thresholds were developed based on substantial evidence that such thresholds represent quantitative levels of GHG emissions, compliance with which means that the environmental impact of the GHG emissions will normally not be cumulatively considerable under CEQA. These thresholds were developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. The working group was formed to assist the SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the state OPR, CARB, the Attorney General's Office, a variety of city and county planning departments in the SoCAB, various utilities such as sanitation and power companies throughout the basin, industry groups, and environmental and professional organizations. As such, a less than significant impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☐ | ☒ |

The City of Santa Ana CAP is a strategic planning document that identifies sources of GHG emissions within the City's boundaries, presents current and future emission estimates, identifies a GHG reduction target for future years, and presents strategies, policies and actions to reduce emissions form the energy, transportation, land use, water use, and waste sectors. The GHG reduction strategies in the CAP build on inventory results and key opportunities prioritized by the City staff and members of the public. The CAP consists of strategies that identify steps the City will take to support reductions in GHG emissions. The City will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the CAP respond to the needs of development through achieving more efficient and sustainable resources.

Both the existing and the projected GHG inventories in the CAP were derived based on the land use designations and associated designations defined in the City of Santa Ana General Plan. The Proposed Project will be in the public right-of-way and is intended to serve existing and planned land uses designated in the General Plan as single-family residential and two-family residential. Therefore, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by the County to develop the CAP.

The Project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. No impact would occur.

### *4.8.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.9 Hazards and Hazardous Materials

A Phase I Environmental Site Assessment (Phase I ESA) was completed for the Proposed Project by Group Delta Consultants, Inc. (Group Delta 2019). The purpose of the Phase I ESA was to review, evaluate, and document present and past land uses and practices, and visually examine project site conditions in order to identify Recognized Environmental Conditions (RECs). A REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of release to the environment, or; (3) under conditions that pose a material threat of a future release to the environment. The Phase I ESA results are summarized below.

### *4.9.1 Environmental Setting*

The project site is located within public ROW along Deodar Street between 17th street to the south and approximately 900 feet (ft) south of Avalon Lane; along Medford Avenue; and along Pasadena Street in the City of Santa Ana, California. The project site located approximately 0.1 miles west of State Route 55 (Costa Mesa Freeway) and approximately one-mile northeast of Interstate 5 (I-5) (Santa Ana Freeway). Areas adjacent to the project site consist of vacant land and commercial and multi-family dwellings to the west of Ponderosa Street. Areas adjacent to Medford Avenue and Pasadena Street consist of single-family residential dwellings.

Previous land uses of the project site were determined using available historical resources. Photographs and historical topographic maps dating between 1896 and 2012 were reviewed for the purpose of the Phase I ESA. Development on the project site from at least 1896 to 1902 was undetermined due to the scale of the topographic maps during this period; the project site consisted of agricultural orchards from at least 1928 to 1952; the project site was developed with public roads consisting of Ponderosa Street, Medford Avenue, and Pasadena Street in the present configuration from at least 1963 to 2012 (Group Delta 2019).

### *4.9.2 Hazards and Hazardous Materials (IX) Environmental Checklist and Discussion*

| **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? | ☐ | ☐ | ☒ | ☐ |

Some hazardous materials, such as diesel fuel, would be used at the project site during construction. The transport of hazardous materials by truck is regulated by federal safety standards under the jurisdiction of the U.S. Department of Transportation. The use of such materials for the construction of the Proposed project would not create a significant hazard to the public. Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | ☒ | ☐ |

During construction some hazardous materials, such as diesel fuel, would be used. A Storm Water Pollution Prevention Plan (SWPPP), listing Best Management Practices (BMPs) to prevent construction pollutants and products from violating any water quality standard or waste discharge requirements would be prepared for the Proposed Project. The release of any spills would be prevented through the implementation of BMPs listed in the SWPPP. Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☒ | ☐ |

There are no schools within one-quarter mile of the project site. The nearest school to the project site is Plumfield Preschool and Kindergarten at 2112 E. Santa Clara Avenue, located approximately 0.30 miles northwest of the project site. Please see the answer to question VII. b) above. Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☒ | ☐ |

The Phase I ESA included a review of the State of California Department of Toxic Substance Control (DTSC) EnviroStor database and the State Water Resources Control Board (SWRCB) GeoTracker database.

The purpose of these searches was to identify any evidence of unauthorized releases of hazardous materials to the surface, subsurface soil, and groundwater; and to identify the presence of underground storage tanks (USTs), leaking underground storage tanks (LUSTs), site clean-ups, disposal sites, wells, and information related to hazardous materials and/or waste. According to the Phase I ESA, the project site was not identified on the EnviroStor or GeoTracker databases and no RECs were identified as a result of this review. A less than significant impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |

The project site is located approximately 6 miles north of John Wayne Airport and is not within a John Wayne Airport Impact Zone (City of Santa Ana 2009). The Proposed Project would involve infrastructure improvements within existing public ROW and would not include the construction of habitable structures or other structures that could pose a safety hazard. As such, the Proposed Project would not result in a safety hazard for people residing or working in the project area. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☒ | ☐ | ☐ |

The City of Santa Ana maintains and Emergency Services Plan that provides direction and guidance for officials and citizens in the event of emergency (City of Santa Ana 1982). Implementation of the Proposed Project would require construction to occur within public ROW in Pasadena Street, Medford Avenue, Deodar Street, and 17th Street. Construction and traffic associated with the Proposed Project has the potential to interfere with emergency response access to areas near the project site. Impact to emergency access would be less than significant with the incorporation of Mitigation Measure HAZ-1.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project is located in a developed area of the City of Santa Ana; there are no wildlands in the vicinity. Additionally, the Proposed Project is not located on land designated as a state or local fire hazard severity zone (CAL FIRE 2019). No impact would occur.

### *4.9.3 Mitigation Measures*

**HAZ-1:** Prior to construction, the City of Santa Ana (or its contractor) shall prepare a Traffic Control Plan to ensure proper access to residences and businesses in the area by emergency vehicles during construction and to maintain traffic flow. The Traffic Control Plan shall be approved by the City of Santa Ana prior to any lane closures.

## 4.10 Hydrology and Water Quality

### *4.10.1 Hydrology and Water Quality (X) Environmental Checklist and Discussion*

| **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? | ☐ | ☐ | ☒ | ☐ |

Potential water quality impacts associated with the Proposed Project include short-term construction-related erosion/sedimentation from ground-disturbing activities and construction-related hazardous material discharge. Impacts associated with construction-related water quality impacts would be avoided or reduced to a level below significance through implementation of standard construction BMPs. Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project would be located entirely within existing paved streets. As such, there would be no substantial increase in impermeable surfaces in the project area compared to existing conditions. Furthermore, the Proposed Project does not require the withdrawal of groundwater. No impacts to groundwater supplies or recharge are anticipated.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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 that would: | | | | |
| i) result in substantial erosion or siltation on- or off-site; | ☐ | ☐ | ☒ | ☐ |
| ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | ☐ | ☐ | ☐ | ☒ |
| iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | ☐ | ☐ | ☐ | ☒ |
| iv) impede or redirect flood flows? | ☐ | ☐ | ☐ | ☒ |

i) Construction of the Proposed Project would require ground disturbing activities, including excavation, grading, and paving. These activities have the potential to result in erosion or siltation on- or off-site. Construction impacts would be less than significant with the implementation of standard construction BMPs. Once construction has completed project areas would be paved and returned to their pre-project condition.

ii) The Proposed Project would be located along existing paved streets. All improvements are below ground and once project construction is completed the project areas would be paved and returned to their pre-project conditions. As such, no changes to the volume of runoff from the project area are anticipated as a result of the Proposed Project. No impact would occur.

iii) The Proposed Project is the installation of sewer mains and laterals along existing paved streets. All improvements are below ground surface and project areas would be paved and returned to their pre-project conditions. As such, the Proposed Project is not anticipated to change the quality and quantity of runoff water in the project area. Post-project stormwater drainage conditions would be the same as existing conditions. No impact would occur.

iv) As previously mentioned all project improvements would be below ground surface along existing paved streets. Once construction is completed all project areas would be paved and returned to their pre-project conditions. Therefore, the Proposed Project would not impede or redirect flood flows. No impact would occur.

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | ☐ | ☐ | ☐ | ☒ |

The project site is not within a flood hazard area (FEMA 2019). Additionally, the project site is located approximately 12 miles northeast of the Pacific Ocean; therefore, tsunamis are not a risk for the project area. The project area is also not located near any reservoirs or lakes that could produces seiches. No impact would occur.

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project would convert existing residences and commercial properties from septic systems to the City's sewer system. This change would result in beneficial impacts to water quality in the project area. The Proposed Project would not interfere with any groundwater management plan. No impact would occur.

### *4.10.2 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.11 Land Use and Planning

### *4.11.1 Environmental Setting*

The project site is located in the Pasadena Street, Medford Avenue, and Deodar Street neighborhood within the City of Santa. Surrounding land uses are described in Table 1-1 in Section 1.3, Surrounding Land Uses/Environmental Setting, of this Initial Study.

### *4.11.2 Land Use and Planning (XI) Environmental Checklist and Discussion*

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project consists of infrastructure improvements within public ROW. Areas within the public ROW disturbed by the Proposed Project would be returned to pre-construction conditions upon

completion of the Proposed Project. Due to the nature of the Proposed Project it would not physically divide an established community and no impact would occur.

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project consists of infrastructure improvements within public ROW; as such, it would not conflict with any applicable land use plans or policies; no impact would occur.

### *4.11.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.12 Mineral Resources

### *4.12.1 Environmental Setting*

At present, there are no mineral extraction activities in the City of Santa Ana. Regionally significant resources are found farther north of the City, along the Santa Ana River within the cities of Orange and Anaheim. Santiago Creek also provides aggregate resources in areas north of the City of Santa Ana. However, there are no Significant Mineral Aggregate Resource Areas (SMARA) areas designated within the City (City of Santa Ana 2010).

### *4.12.2 Mineral Resources (XII) Environmental Checklist and Discussion*

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☐ | ☒ |

The project area is fully developed and characterized by residential and commercial land uses. Proposed improvements would occur within existing paved roads. The project site is not located on a known important mineral resource recovery site. No impacts are anticipated.

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

According to the Santa Ana General Plan, the planning area does not have significant mineral resources and there are no mineral extraction activities in the City. Regionally significant resources are found farther north of the City, along the Santa Ana River within the cities of Orange and Anaheim. Santiago Creek also provides aggregate resources in areas north of the City of Santa Ana. There are no Significant Mineral Aggregate Resource Areas (SMARA) areas designated within the City (City of Santa Ana 2010). No impact would occur.

### *4.12.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.13 Noise

### *4.13.1 Environmental Setting*

#### Noise Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in $L_{eq}$) and the average daily noise levels/community noise equivalent level (in $L_{dn}$/CNEL).

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks, and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways, and hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 decibels (dBA) per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source.

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise but are less effective than solid barriers.

### *4.13.2 Noise (XIII) Environmental Checklist and Discussion*

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☒ | ☐ | ☐ |

## Construction Noise Impacts

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., grading, excavation, trenching, paving). Noise generated by construction equipment, including excavators, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site. The nearest noise sensitive land uses to the Project site are residences located on Pasadena Street, Medford Avenue and Deodar Street in all directions. All residences are located directly adjacent (less than 20 feet) from the Project site.

Section 18-314, *Special Provisions*, of the City of Santa Ana Municipal Code prohibits construction between the hours of 8:00 p.m. and 7:00 a.m. on weekdays or Saturday, or any time on Sunday or federal holidays but does not promulgate a numeric threshold pertaining to the noise associated with construction. This is due to the fact that construction noise is temporary, short term, intermittent in nature, and would cease on completion of the Project. Furthermore, the City of Santa Ana is a developing urban community and construction noise is generally accepted as a reality within the urban environment. Additionally, construction would occur throughout the Project site and would not be concentrated at one point.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, the construction equipment noise levels were calculated using the Roadway Noise Construction Model for the demolition, site preparation, trenching, paving and painting and compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by National Institute for Occupational Safety and Health (NIOSH). A division of the US Department of Health and Human Services,

NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA $L_{eq}$ is used as an acceptable threshold for construction noise at the nearby existing and future planned sensitive receptors.

The anticipated short-term construction noise levels generated for the necessary equipment is presented in Table 4.13-1**.** Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the Project site (FTA 2018). As previously stated, the nearest noise sensitive land uses to the Project site are residences located approximately 20 feet distant.

**Table 4.13-1. Onsite Construction Average (dBA) Noise Levels by Receptor Distance and Construction Equipment**

| Equipment | Estimated Exterior Construction Noise Level @ Closest Residence | Construction Noise Standard (dBA $L_{eq}$) | Exceeds Standards? |
|---|---|---|---|
| **Demolition** | | | |
| Scrapers(1) | 87.6 | 85 | **Yes** |
| Rubber Tired Dozers (1) | 85.6 | 85 | **Yes** |
| Tractors/Loaders/Backhoes (1) | 88.0 | 85 | **Yes** |
| **Combined Demolition Equipment** | **91.1** | 85 | **Yes** |
| **Site Preparation** | | | |
| Scrapers (1) | 87.6 | 85 | **Yes** |
| Graders (1) | 89.0 | 85 | **Yes** |
| Tractors/Loaders/Backhoes (1) | 88.0 | 85 | **Yes** |
| **Combined Site Preparation Equipment** | **93.0** | 85 | **Yes** |
| **Trenching** | | | |
| Dumpers/Tenders (1) | 80.4 | 85 | **No** |
| Excavators (1) | 84.7 | 85 | **No** |
| Tractors/Loaders/Backhoes (2) | 88.0(each) | 85 | **Yes** |
| Concrete/Industrial Saws (1) | 90.5 | 85 | **Yes** |

**Table 4.13-1. Onsite Construction Average (dBA) Noise Levels by Receptor Distance and Construction Equipment**

| Equipment | Estimated Exterior Construction Noise Level @ Closest Residence | Construction Noise Standard (dBA $L_{eq}$) | Exceeds Standards? |
|---|---|---|---|
| **Combined Trenching Equipment** | **94.5** | 85 | **Yes** |
| **Paving & Painting** | | | |
| Cement and Mortar Mixers (4) | 82.6 (each) | 85 | **No** |
| Pavers (1) | 82.2 | 85 | **No** |
| Air Compressors (1) | 81.6 | 85 | **No** |
| Rollers (1) | 81.0 | 85 | **No** |
| Tractors/Loaders/Backhoes(1) | 88.0 | 85 | **Yes** |
| Combined Paving & Painting Equipment | **92.6** | 85 | **Yes** |

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment B for Model Data Outputs.
Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2.

$L_{eq}$ = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown in Table 4.13-1, a majority of the individual pieces of construction equipment and all cumulative construction equipment would exceed the NIOSH noise threshold of 85 dBA at the adjacent sensitive receptors. It is recommended that the implementation of temporary noise barriers be used during Project construction. Noise barriers or enclosures can provide a sound reduction of 35 dBA or greater (WEAL 2000). To be effective, a noise enclosure/barrier must physically fit in the available space, must completely break the line of sight between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In the case of Project construction, an enclosure/barrier would only be necessary at the area of the construction site where noise producing activities are being performed.

Implementation of mitigation measures **NOI-1** and **NOI-2** would substantially reduce construction-generated noise levels. As previously described, noise barriers or enclosures such as that required by mitigation measure **NOI-2** can provide a sound reduction 35 dBA or greater (WEAL 2000), which would be a reduction robust enough to maintain construction noise levels less than 85 dBA. Therefore, Project

construction activities would not expose persons to and generate noise levels in excess of County standards with implementation of **NOI-1** and **NOI-2**.

### Operational Noise Impact

The Proposed Project consists of sewer and water infrastructure improvements. It would not be a source of mobile or stationary noise sources and thus would not be a source of operational noise. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Result in generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☒ | ☐ |

### Construction Vibration Impacts

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Proposed Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is not anticipated that pile drivers would be necessary during Project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in Table 4.13-2.

**Table 4.13-2. Vibration Source Amplitudes for Construction Equipment at 20 Feet**

| Equipment Type | Peak Particle Velocity at 20 Feet (inches per second) |
|---|---|
| Large Bulldozer | 0.124 |
| Caisson Drilling | 0.124 |
| Loaded Trucks | 0.106 |
| Rock Breaker | 0.115 |
| Jackhammer | 0.049 |
| Small Bulldozer/Tractor | 0.004 |

*Source: FTA 2018; Caltrans 2020*

The City does not regulate vibration associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans's (2020) recommended standard of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for normal residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structures of concern to the construction site are residential structures located less than 20 feet away on Pasadena Avenue, Medford Avenue and Deodar Street. Based on the vibration levels presented in Table 4.13-2, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.124 inches per second peak particle velocity at 20 feet. Therefore, vibration from construction activities experienced at the nearest adjacent residences would be expected to be below the 0.2 inch per second peak particle velocity threshold. Impacts would be less than significant.

### Operational Vibration Impacts

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels. Therefore, the Project would result in no groundborne vibration impacts during operations. No impact would occur.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

The project site is located approximately 6 miles north of the John Wayne International Airport. Thus, the Proposed Project would not result in the exposure of people residing or working in the Project area to excessive noise. There is no impact.

#### *4.13.3 Mitigation Measures*

**NOI-1**: The Project construction and improvement plans will include the following requirements for construction activities:

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

- A sign, legible at a distance of 50 feet, shall be posted at the Project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address construction noise concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator.
- Identification of construction noise reduction methods. These reduction methods may include shutting off idling equipment (5 minutes), installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and using electric air compressors and similar power tools.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.
- Per Section 18-314 of the City's Municipal Code, construction shall be prohibited between the hours of 8:00 p.m. and 7:00 a.m. on weekdays or Saturday, or any time on Sunday or federal holidays.

**NOI-2:** In order to reduce construction noise, during the demolition, site preparation, trenching, painting and paving phases, a temporary noise barrier or enclosure should be positioned between Project construction and the residences in a manner that breaks the line of sight between the construction equipment and these residences to the extent feasible. The composition, length, height, and location of noise control barrier walls should be adequate to assure proper acoustical performance and preclude structural failure.

Implementation of mitigation measures **NOI-1** and **NOI-2** would substantially reduce construction-generated noise levels. As previously described, noise barriers or enclosures such as that recommended in mitigation measure **NOI-2** can provide a sound reduction 35 dBA or greater (WEAL 2000), which would be a reduction robust enough to maintain construction noise levels less than 85 dBA. Temporary noise barriers can consist of a solid plywood fence and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket attached to chain link fencing. Therefore, Project construction activities would not expose persons to and generate noise levels in excess of County standards with implementation of **NOI-1** and **NOI-2**.

## 4.14 Population and Housing

### *4.14.1 Population and Housing (XIV) Environmental Checklist and Discussion*

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project would install a sewer system and connect to existing properties with septic systems. The new sewer and water infrastructure would accommodate the existing residences and would not directly or indirectly induce population growth. No impact would occur.

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project does not include the removal or disturbance of existing housing; therefore, it would not displace people. The sewer and water pipelines would be installed along paved roadways. No impact to housing would occur.

### *4.14.2 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.15 Public Services

### *4.15.1 Public Services (XV) Environmental Checklist and Discussion*

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

The Proposed Project would not create a substantial new fire or public safety hazard. The Proposed Project would also not generate new employment or population growth; therefore, no increase in the demand for schools, parks, or other public facilities would occur. No impacts are anticipated.

### *4.15.2 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.16 Recreation

### *4.16.1 Recreation (XVI) Materials Checklist*

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) 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? | ☐ | ☐ | ☐ | ☒ |

The nearest neighborhood parks are Portola Park, Mabury Park and Cabrillo Park, all of which are just over one mile away from the project site. No increase in demand, or use of, existing parks or recreational facilities would result from the implementation of the Proposed Project because no population growth would occur. The Proposed Project consists of the construction of the new sewer systems that would require annual routine maintenance. Routine maintenance of project facilities would be managed by existing City public works staff and would not result in an increase in employment. Therefore, no increase in demand or use of existing parks or recreational facilities would result from the implementation of the Proposed Project. No impact would occur.

| | Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| b) | Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project will transition the neighborhood from a septic to sewer system and would not affect recreational facilities. As such, the Proposed Project would not require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. No impact would occur.

### *4.16.2 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.17 Transportation

### *4.17.1 Transportation (XVII) Environmental Checklist and Discussion*

| | Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| a) | Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | ☐ | ☐ | ☒ | ☐ |

**Construction Impacts**

The Proposed Project would generate short-term construction related vehicle trips. However, traffic generated during construction of the Proposed Project would be temporary and would not conflict with the City of Santa Ana's Circulation Element. Impacts would be less than significant.

**Operational Impacts**

Operational impacts are anticipated to be similar to existing conditions because the Proposed Project would continue the existing use as a public ROW once construction is complete. No operational impact would occur.

| Would the Project: | | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| b) | Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | ☐ | ☐ | ☐ | ☐ |

CEQA Guidelines section 15064.3, subdivision (b) details the use of vehicle miles traveled (VMT) to assess the significance of transportation impacts. As detailed in CEQA Guidelines section 15064.3, subdivision (c), a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide. As of the preparation of this document (September 2020), VMT analysis has not been adopted by the City of Santa Ana, and therefore this question does not apply to the Proposed Project.

| Would the Project: | | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| c) | Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project would install sewer mains, a water main, and laterals below the ground along existing paved streets. Once construction ends the project area would be returned to its pre-project condition. No modifications to the street configurations or design are proposed. Improvements have been designed by a registered civil engineer to meet the City of Santa Ana's development standards. No impact would occur.

| Would the Project: | | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| d) | Result in inadequate emergency access? | ☐ | ☒ | ☐ | ☐ |

Construction of the Proposed Project would require construction activities to occur within public ROW along 17th Street, Deodar Street, Pasadena Avenue, and Medford Avenue. This would result in temporary construction truck traffic which has the potential to interfere with emergency response access to areas near the project site. Impacts associates with inadequate emergency access would be less than significant with the implementation of Mitigation Measure HAZ-1

### *4.17.2 Mitigation Measures*

HAZ-1 is listed in Section 4.9.3 of this Initial Study.

## 4.18 Tribal Cultural Resources

### *4.18.1 Regulatory Setting*

#### Assembly Bill 52

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to those California Native American tribes that requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include TCRs, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the Public Resources Code defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Section 21074(a) of the Public Resource Code defines TCRs for the purpose of CEQA as:

1. Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or

    b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or

    c. 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b also meet the definition of a historical resource under CEQA, a TCR may also require additional consideration as a historical resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies provide tribes that requested notification an opportunity to consult at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR

is considered a significant impact on the environment under CEQA, consultation is used to develop appropriate avoidance, impact minimization, and mitigation measures.

### *4.18.2 Summary of AB 52 Consultation*

On December 12, 2019, the City of Santa Ana sent project notification letters to the following California Native American tribes, which had previously submitted general consultation request letters pursuant to 21080.3.1(d) of the Public Resources Code:

- Agua Caliente Band of Cahuilla Indians
- Gabrieleno-Tongva Tribe
- Gabrieleno Band of Mission Indians – Kizh Nation
- Gabrieleno/Tongva Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrieleno Tongva Indians of California Tribal Council
- Juaneño Band of Mission Indians
- Juaneño Band of Mission Indians Acjachemen Nation - Berlardes
- Juaneño Band of Mission Indians Acjachemen Nation – Romero
- La Jolla Band of Luiseno Indians
- Pala Band of Mission Indians
- Pauma Band of Luiseno Indians
- Pechanga Band of Luiseno Indians
- Rincon Band of Luiseno Indians
- San Luis Rey Band of Mission Indians
- Soboba Band of Luiseno Indians

Each recipient was provided a brief description of the project and its location, the lead agency contact information, and a notification that the tribe has 30 days to request consultation. The 30-day response period concluded on January 11, 2020.

As a result of the initial notification letters, the City of Santa Ana received the following responses:

- Gabrieleno Band of Mission Indians – Kizh Nation: Responded by letter indicating the Proposed Project lies within their ancestral tribal territory and accepting the consultation invitation.

No response was received from the other contacted California Native American tribes.

The City initiated consultation and scheduled a conference call for May 13, 2020. During the consultation, the tribe provided historical information regarding the site being included in their ancestral lands. The City provided a Memorandum of Understanding (MOU) to the tribe on May 18, 2020 in which the City agreed to work cooperatively in good faith and mutual trust. Ultimately, the tribe sent an email to the City on June 4, 2020 with a list of mitigation measures and the City and tribe have agreed to specific mitigation measures for tribal cultural resources. At this time, the consultation remains ongoing for further dialogue. Documentation of the consultation is included in Appendix E.

### *4.18.3 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion*

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Cause a substantial adverse change in the significance of a 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) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or | ☐ | ☒ | ☐ | ☐ |
| ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe. | ☐ | ☒ | ☐ | ☐ |

i-ii) While there are no known tribal cultural resources (TCRs) in the project footprint, ground-disturbing activities have the potential to result in the discovery of, or inadvertent damage to, archaeological contexts and human remains, and this possibility cannot be eliminated. Consequently, there is a potential for significant impacts on TCRs. Implementation Mitigation **TCR-1** through **TCR-7** would reduce the potential impacts to less than significant.

### *4.18.4 Mitigation Measures*

**TCR-1: Retain a Native American Monitor/Consultant**: The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both ancestrally affiliated with the project area and approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the Native American Heritage Commission's (NAHC) Tribal Contact list for the area of the project location. This list is provided by the NAHC. A Native American monitor shall be retained by the Lead Agency or owner of the project to be on site to monitor all project-related, ground-disturbing construction activities (i.e., boring, grading, excavation, potholing, trenching, etc.). A monitor associated with one of the NAHC recognized Tribal governments which have commented on the project shall provide the Native American monitor. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.

**TCR-2: Unanticipated Discovery of Tribal Cultural and Archaeological Resources**: Upon discovery of any tribal cultural or archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All tribal cultural and archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request preservation in place or recovery for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources.

**TCR-3: Public Resources Code Sections 21083.2(b) for unique archaeological resources.** Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. All Tribal Cultural Resources shall be returned to the Tribe. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in

the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to the Tribe or a local school or historical society in the area for educational purposes.

**TCR-4: Unanticipated Discovery of Human Remains and Associated Funerary Objects**: Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC and PRC 5097.98 shall be followed.

**TCR-5: Resource Assessment & Continuation of Work Protocol**: Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

**TCR-6: Kizh-Gabrieleno Procedures for burials and funerary remains:** If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

**TCR-7: Treatment Measures:** Prior to the continuation of ground disturbing activities, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be

diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

## 4.19 Utilities and Service Systems

### *4.19.1 Utilities and Service Systems (XIX) Environmental Checklist and Discussion*

| **Would the Project:** | | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|---|
| a) | Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |

The Proposed Project is the construction of sewer facilities which would transfer approximately 32 existing residences and businesses from septic systems to the City's sewer system. The volume of additional wastewater that would enter the sewer system from these residential and commercial properties is not anticipated to exceed the capacity of the Orange County Sanitation District. As such, no new or expanded wastewater treatment facilities would be required. The environmental effects from constructing the proposed sewer improvements are described in this Initial Study. Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | ☐ | ☐ | ☒ | ☐ |

The Proposed Project is a sewer construction project, which would only require water during construction for compaction and dust control purposes. During operation the Proposed Project would not require water. Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☒ | ☐ |

The City's sewer system connects to the Orange County Sanitation District, which provides wastewater treatment. The addition of 32 residential and commercial properties would not generate an increase of volume that would exceed the wastewater treatment capacity of the Orange County Sanitation District. Impacts would be less than significant.

| **Would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☒ | ☐ |

Minimal waste would be generated by the Proposed Project during construction. During operation the Proposed Project would not generate solid waste. As such, the Proposed Project is not anticipated to generate solid waste in excess of State or local standards. Impacts would be less than significant.

| Would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | ☐ | ☐ | ☐ | ☒ |

Waste generated by the Proposed Project would comply with all applicable federal, state, and local statutes and regulations related to solid waste. No impact would occur.

### *4.19.2 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.20 Wildfire

### *4.20.1 Environmental Setting*

The State Responsibility Area (SRA) is the area in the state where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. The SRA covers 31 million acres to which the State Department of Forestry and Fire Protection (CAL FIRE) provides a basic level of wildland fire prevention and protection services. According to CAL FIRE, the project site is located within an Unincorporated Local Responsibility Area (LRA) (CAL FIRE 2019). While the project site is exposed to strong Santa Ana winds, the nearest SRA hazardous zone is located at Loma Ridge Park, which is nearly 10 miles away from the project site. The project site is located in a highly urbanized setting and is not within a hazardous zone.

### *4.20.2 Wildfire (XX) Environmental Checklist and Discussion*

| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project: | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ |

The project site is not located within or near a very high fire hazard severity zone and is not expected to impact the City's emergency response plan. No impact would occur.

| **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project is not expected to create or exacerbate wildfire risk or accompanying pollutants. The Proposed Project would not be located within or near a very high fire hazard severity zone. No impact would occur.

| **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

The Proposed Project does not require installation of infrastructure that may exacerbate wildfire risk or substantially impact the environment. No impact would occur.

| **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |

The project site resides in a flat neighborhood without nearby hills. The site is located in a highly urbanized area with little susceptibility to a devastating wildfire. Flooding and landslides are not anticipated to occur because of runoff, post-fire instability, or drainage changes. No impact would occur.

### *4.20.3 Mitigation Measures*

No significant impacts were identified, and no mitigation measures are required.

## 4.21 Mandatory Findings of Significance

### *4.21.1 Mandatory Findings of Significance (XXI) Environmental Checklist and Discussion*

| **Does the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) 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? | ☐ | ☐ | ☒ | ☐ |

Impacts to biological and cultural resources are discussed in the respective sections of this Initial Study. Impacts would be less than significant.

| **Does the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) 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)? | ☐ | ☒ | ☐ | ☐ |

Potentially significant impacts from the Proposed Project identified in this Initial Study would occur during construction and would be mitigated to a less than significant level. No operational significant impacts were identified. As such, the Proposed Project is not anticipated to result in cumulative considerable impacts.

| **Does the Project:** | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ☒ | ☐ |

Direct and indirect impacts to human beings would be less than significant with the implementation of mitigation measures listed in this Initial Study.

# SECTION 5.0 LIST OF PREPARERS

## 5.1 City of Santa Ana

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# SECTION 7.0 LIST OF APPENDICES

Appendix A – Project Site Photos

Appendix B – Emissions Technical Memorandum

Appendix C – Noise Technical Memorandum

Appendix D – Cultural Records Search

Appendix E – Tribal Resources Consultation

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