Agenda Item 7A
Approvals:
City Manager
Dept. Head DR
Attorney
Finance

AGENDA REPORT
SAN CLEMENTE CITY COUNCIL MEETING
Meeting Date: December 4, 2012

Department: Public Works / Engineering
Prepared By: Amir K. Ilkhanipour, Senior Civil Engineer AKI

Subject: ***PUBLIC HEARING AND APPROVAL OF THE MITIGATED NEGATIVE DECLARATION FOR THE AVENIDA COLUMBO STORM DRAIN EXTENSION, PROJECT NO. 18005.***

Summary: Drainage on Avenida Columbo is collected and conveyed via street curb and gutter to an existing catch basin located at the end of the cul-de-sac. A 24-inch storm drain pipe extends approximately 45 feet beyond the catch basin on the existing slope. To improve the drainage, this storm drain needs to be extended down the slope to the bottom of the canyon. An above-ground pipe installation method is selected to minimize the project impacts.

UltraSystems Environmental has prepared a Mitigated Negative Declaration (MND) to integrate the environmental requirements and mitigation measures to ensure that the proposed project will not result in any significant, adverse effects on the biological and cultural resources. The Initial Study, which serves as the basis for the MND (Sections 3 & 4), has been filed with the State Clearinghouse and was available for public review and comments from October 31, 2012 through November 29, 2012. As of the date of preparing this report, no comments have been received.

Recommended Action: STAFF RECOMMENDS THAT the City Council adopt Resolution No. _____ entitled "A Resolution of the City Council of the City of San Clemente, California, Approving the Mitigated Negative Declaration for the Avenida Columbo Storm Drain Extension, Project No. 18005".

Fiscal Impact: None.

Attachments: Location Map
Resolution No._____
Ave. Columbo Storm Drain Mitigated Negative Declaration

Notification: 300-foot Radius Notifications.

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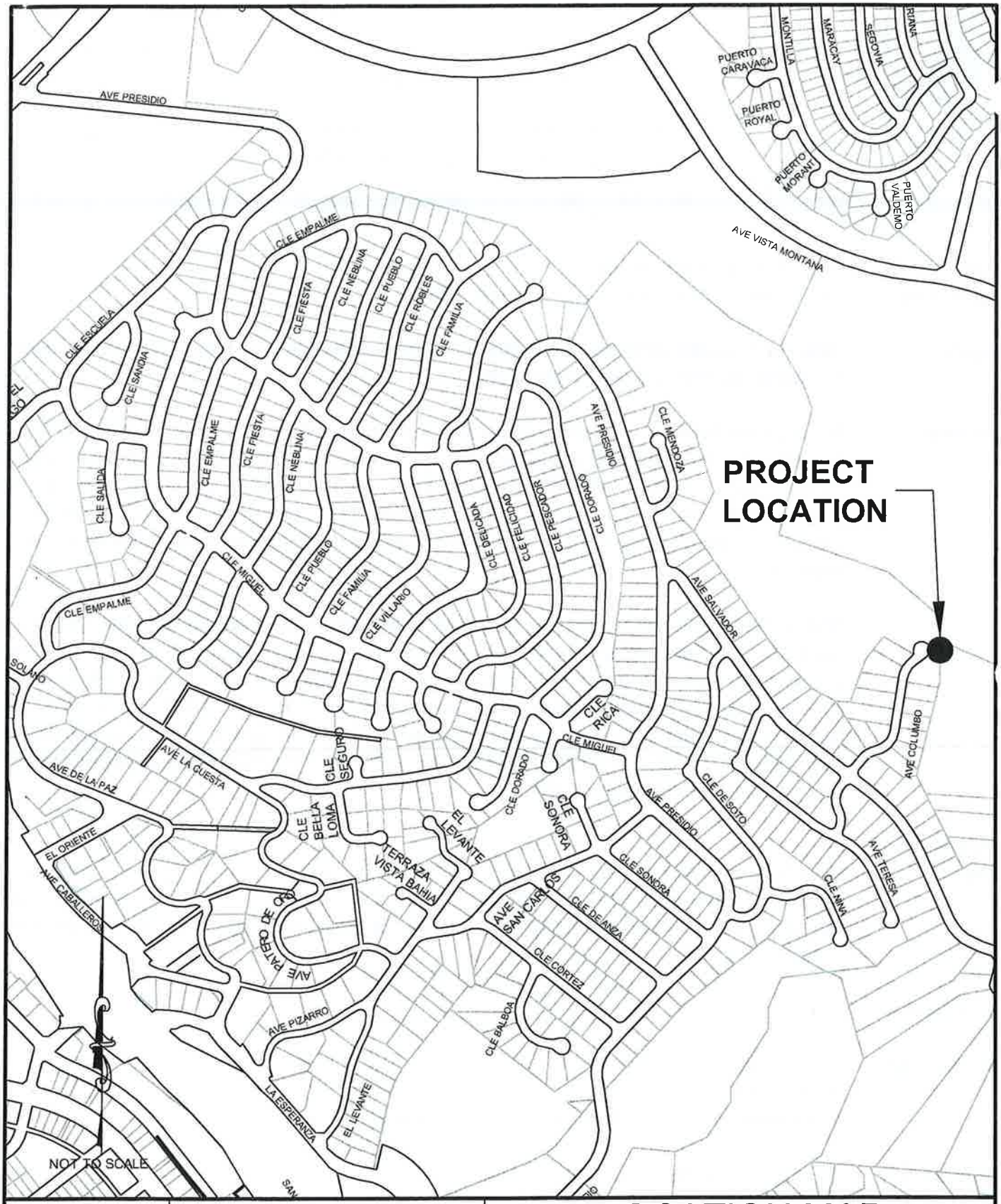

City of San Clemente

910 Calle Negocio, Suite 100
San Clemente, CA 92673
Tel (949) 361-6100
Fax (949) 361-8316

LOCATION MAP

Avenida Columbo Storm Drain Extension

P.N. 18005

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RESOLUTION NO._____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN CLEMENTE, CALIFORNIA, APPROVING THE MITIGATED NEGATIVE DECLARATION FOR THE AVENIDA COLUMBO STORM DRAIN EXTENSION PROJECT NO. 18005

WHEREAS, the City proposes to extend an existing storm drain line by connecting a new, above-ground 24" High Density Polyethylene (HDPE) pipe to an existing 24" HDPE pipe. The existing storm drain line is an underground 24" HDPE pipe that extends approximately 46 feet from the upstream catch basin, at the end of the Avenida Columbo cul-de-sac, down the canyon slope, and outlets on the hillside into an existing concrete outlet structure. The existing pipe does not extend to the bottom of the canyon.

The new pipe will extend approximately 175 feet from the existing pipe to the bottom of the canyon. Drainage that flows through the new pipe will be collected in an energy dissipater outlet structure consisting of a precast concrete vault that discharges to a riprap apron. Flow will be dispersed within the canyon bottom, then traverse through canyon vegetation, before it drains into a flood control facility.

The new pipe will be held in place by pipe anchors at 17 feet on center per Caltrans Standard Plan D87A or D87B. The 100-year flow rate in the new pipe is approximately 5-inches deep with a velocity of 40 fps. The proposed energy dissipater will reduce flow velocities to non-erosive level prior to flow reaching the natural canyon areas. The plans call for a 12-foot wide construction limit for clearing, which equates to 6 feet on either side of the center line of the proposed pipe extension. Clearing will mostly affect vegetation since the new pipe is above ground. There will be approximately 20 cubic yards of excavation for the placement of the riprap and the energy dissipater structure; and

WHEREAS, staff processed and completed the environmental check list, initial study and Mitigated Negative Declaration for the project in accordance with the California Environmental Quality Act. After reviewing the initial study and the proposed Mitigated Negative Declaration, the City Council finds that the Mitigated Negative Declaration reflects the independent judgment of the City of San Clemente and that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions have been made by or agreed to in the Mitigated Negative Declaration; and

WHEREAS, the Engineering Division recommends that the City Council 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 have been made by or agreed to and therefore a Mitigated Negative Declaration for the project is warranted; and

WHEREAS, on December 4, 2012 the City Council held a duly-noticed public hearing on the subject application and considered evidence presented by the City staff, and other interested parties; and

WHEREAS, the City Engineer is the custodian of records for those documents comprising the record of proceedings on the Mitigated Negative Declaration, and those records are stored in the Engineering Division of the City of San Clemente;

NOW, THEREFORE, the City Council of the City of San Clemente does hereby approve the Mitigated Negative Declaration for the Avenida Columbo Storm Drain Extension, Project No. 18005 and authorizes the issuance of a Notice of Determination pursuant to CEQA Guidelines Section 15075.

PASSED AND ADOPTED this 4th day of December, 2012

_____
Mayor of the City of
San Clemente, California

ATTEST:

_____
CITY CLERK of the City of
San Clemente, California

STATE OF CALIFORNA)
COUNTY OF ORANGE) §
CITY OF SAN CLEMENTE)

I, JOANNE BAADE, City Clerk of the City of San Clemente, California, do hereby certify that Resolution No. _____ was adopted at a regular meeting of the City Council of the City of San Clemente held on the day of , , by the following vote:

AYES:

NOES:

ABSENT:

_____
CITY CLERK of the City of
San Clemente, California

Approved as to form:

_____
City Attorney

7A-4

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION CITY OF SAN CLEMENTE

AVENIDA COLUMBO STORM DRAIN EXTENSION PROJECT

Prepared for:

City of San Clemente
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San Clemente, California 92673
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UltraSystems
environmental | management | planning

Prepared by:

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Project Manager
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October 2012

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1.0 INTRODUCTION

Section 1.1 Document and Scope

This document presents an assessment of the environmental impacts that would result from the construction and subsequent operation of the Avenida Columbo Storm Drain Extension Project (proposed project). The proposed project would extend the existing storm drain at the end of the Avenida Columbo cul-de-sac to the bottom of the adjacent canyon to outlet. A detailed description of the proposed project is provided in Section 2.0, Project Description.

The City of San Clemente (City), in its capacity as the lead agency for this proposed project, has caused the preparation of this document in fulfillment of its environmental review obligations pursuant to the provisions of California Environmental Quality Act (CEQA) of 1970, *Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines)*, and the City's CEQA implementation requirements, all as amended. CEQA formally calls this document an Initial Study, and it is a critical component of the environmental review process. It provides decision-makers, other public agencies, private groups and/or individuals with an objective assessment of whether significant environmental impacts may result from implementing the proposed project.

Although prepared with consultant support, all analyses, conclusions, findings and determinations made in this document fully represent the independent judgment and position of the lead agency.

Section 1.2 Statutory Authority

This document has been prepared in accordance with Article 6, Negative Declaration Process, sections 15070 through 15075 of the *State CEQA Guidelines*. Pursuant to Section 15070, the City has prepared an initial study/mitigated negative declaration (IS/MND) for the Avenida Columbo Storm Drain Extension Project because the City has made or agreed to revisions in the project plans before the IS/MND have been released for public review, which would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur.

Pursuant to Section 15071 this IS/MND includes:

(a) A brief description of the project, including a commonly used name for the project, if any;

(b) The location of the project, shown on a map, and the name of the project proponent;

(c) A proposed finding that the project will not have a significant effect on the environment;

(d) An attached copy of the Initial Study documenting reasons to support the finding; and

(e) Mitigation measures included in the project designed to avoid or reduce potentially significant effects.

The lead agency, pursuant to Section 15072, must provide a Notice of Intent to adopt this IS/MND to the public, responsible agencies, trustee agencies and the Orange County Clerk, sufficiently prior to adoption by the lead agency of this IS/MND to allow the public and agencies a 30-day review period pursuant to Section 15105 of the *State CEQA Guidelines*.

The City of San Clemente Council, pursuant to Section 15074, is required to consider the IS/MND together with any comments received during the public review process prior to approving the project. The City shall adopt the IS/MND only if it finds on the basis of the whole record before it (including the Initial Study and any comments received), that there is no substantial evidence the project would have a significant effect on the environment and that the IS/MND reflects the City's independent judgment and analysis.

When adopting the IS/MND the City shall specify the location and custodian of the documents and/or other material, which constitute the record of proceedings upon which its decision is based. The City shall also adopt a program for reporting on or monitoring the changes, which it has either required in the project or made a condition of approval to mitigate or avoid significant environmental effects.

Should the City decide to carry out and approve the Avenida Columbo Storm Drain Extension Project after it has approved this IS/MND, it is required to file a Notice of Determination (NOD) pursuant to Section 15075. The NOD must include:

(1) An identification of the project including its common name where possible, and its location.

(2) A brief description of the project.

(3) The date on which the City approved the project.

(4) The City's determination that the project will not have a significant effect on the environment.

(5) A statement that a IS/MND has been prepared pursuant to the provisions of CEQA.

(6) The address where a copy of the IS/MND may be examined.

The City shall file the NOD with the Orange County Clerk within five working days of project approval. The County Clerk is required to post the NOD for public inspection within 24 hours of receipt, and notice shall remain posted for a period of at least 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA.

Section 1.3 Incorporation by Reference

Pursuant to Section 15150 of the *State CEQA Guidelines*, this IS/MND incorporates by reference all or portions of other technical documents that are a matter of public record. Those documents either relate to the project or provide additional information concerning the environmental setting in which the project is proposed.

Where all or a portion of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of this IS/MND.

The information contained in this IS/MND is based, in part, on the following documents that include the project site or provide information addressing the general project area:

- *City of San Clemente General Plan*
- *City of San Clemente Municipal Code*

Section 1.4 Entitlements and Regulatory Permits

At this time, no regulatory permits are anticipated to be needed from responsible agencies who would rely in part upon the information in this IS/MND when making their determinations.

Section 1.5 Determination

Section 4.0 of this IS/MND presents a detailed analysis of the potential environmental impacts of the proposed project. It has been determined that the proposed project will not have a significant effect on the environment when mitigation measures are incorporated.

Section 1.6 Initial Study Organization and Contents

This IS/MND is organized into six (6) separate sections, which are identified and briefly described below:

Section 1.0, Introduction, describes the purpose of, and statutory basis for, this document.

Section 2.0, Project Description, describes the location, boundaries, planning background, objectives and important characteristics of the proposed project.

Section 3.0, Environmental Checklist Form, summarizes the impact significance findings identified in Section 4.0 below in a checklist format, and presents the lead agency's determination to require the preparation of a MND.

Section 4.0, Environmental Checklist & Evaluation, contains the analyses and other substantial evidence employed by the lead agency to arrive at the determination required in Section 3.0 above. Mandatory Findings of Significance are also presented in this section.

Section 5.0, Organizations & Persons Consulted, consists of all organizations and persons consulted in compiling this document.

Section 6.0, References, is a list of references to documents used in compiling this document.

Section 7.0, List of Preparers, is a list of all persons who prepared this document.

Section 8.0, Mitigation Monitoring and Reporting Program, provides the mitigation program that will be adopted by the City Council as part of the Mitigated Negative Declaration, pursuant to CEQA (Public Resources Code) Section 21081.6.

Section 9.0, Revisions to the IS/MND, (to be included in Final IS/MND) articulates and describes the changes that were made to the text of the publicly circulated document.

Section 10.0, Comments and Responses to Comments, (to be included in Final IS/MND) contains comments and written responses to comments received on the IS/MND during the public review period (Wednesday, October 31, 2012 to Thursday, November 29, 2012).

2.0 PROJECT DESCRIPTION

Section 2.1 Project Location

The project site is located in the southeast portion of the City of San Clemente at the end of the Avenida Columbo cul-de-sac. The nearest cross street is Avenida Salvador. **Figures 2.1-1 and 2.1-2** depict regional and vicinity maps, respectively.

Section 2.2 Project Description

The proposed project will extend an existing storm drain line. A new, above-ground 24" High Density Polyethylene (HDPE) pipe will be connected to an existing 24" HDPE pipe. The existing storm drain line is an underground 24" HDPE pipe that extends approximately 46 feet from the upstream catch basin, at the end of the Avenida Columbo cul-de-sac, down the canyon slope, and outlets on the hillside into an existing concrete outlet structure. The existing pipe does not extend to the bottom of the canyon.

The new pipe will extend approximately 175 feet from the existing pipe to the bottom of the canyon. Drainage that flows through the new pipe will be collected in an energy dissipater outlet structure consisting of a precast concrete vault that discharges to a riprap apron. Flow will be dispersed within the canyon bottom, then traverse through canyon vegetation, before it drains into a flood control facility.

The new pipe will be held in place by pipe anchors at 17 feet on center per Caltrans Standard Plan D87A or D87B. The 100-year flow rate in the new pipe is approximately 5-inches deep with a velocity of 40 fps. The proposed energy dissipater will reduce flow velocities to non-erosive level prior to flow reaching the natural canyon areas. The plans call for a 12-foot wide construction limit for clearing, which equates to 6 feet on either side of the center line of the proposed pipe extension. Clearing will mostly affect vegetation since the new pipe is above ground. There will be approximately 20 cubic yards of excavation for the placement of the riprap and the energy dissipater structure.

Existing Site Characteristics and Surrounding Uses

The project site is located on a steep slope and is surrounded by open space to the north, west and east, with single-family homes to the south. Uses within the project vicinity are entirely residential.

In the existing condition, runoff from the upstream areas of the development travel downstream from Avenida Salvador to the inlet on Avenida Columbo. There is a flow-by catch basin on Avenida Salvador approximated 420 feet south of the intersection with Avenida Columbo. Any flow that by-passes this catch basin will flow downstream to the Avenida Columbo catch basin. The watershed tributary to the Avenida Columbo inlet includes both sides of Avenida Columbo up to the intersection with Avenida Salvador, as well as the north eastern half of Avenida Salvador from Avenida Columbo to the existing flow-by catch basin. The existing watershed boundaries are shown on **Figure 2.1-3**: *Hydrology Map*.

Project Site Zoning and General Plan Designation

The western portion of the project site is zoned RVL-IC (Residential, Very Low) 1.0 Unit/20 Gross Acres and the eastern portion of the project site is zoned RL-1 (Residential, Low) 4.5 Units/Gross Acres (7.0 Units/Net Acre) on Sheet 20 of the City's Zoning Map.

Table 17.32.030, Residential Zones Uses, from Title 17 of the City's Municipal Code lists the primary uses allowed to occur on a property. The primary uses can be permitted or conditionally permitted.

The RVL land use designation is the least intense residential designation in the City, and is intended to preserve currently undeveloped canyons which are either geologically unstable or aesthetic, open-space, or biological resources. This zone is intended as an area for the development of single-family homes on significant acreage at a maximum density of 1.0 dwelling units per twenty (20) gross acres or per legal parcel of record, whichever is smaller in size.

The RL land use designation permits the development of low-density, single-family residential neighborhoods with single-family dwellings. A maximum density of seven dwelling units per net acre is allowed in this zone.

City-initiated projects in the RVL and RL zones are subject to a review process prescribed by the City.

The western portion of the project site is designated RVL (Residential, Very Low) 1.0 Unit/20 Gross Acres and the eastern portion of the project site is designated OS2 (Privately Owned Open Space) by the City's General Plan Land Use Element. The OS2 designation is intended for open space and there is no formal easement.

The following General Plan policies apply to the proposed project:

- **Policy 1.9.13** Require that development be sited and designed to protect significant environmental resources, including the provision of open space, in accordance with the Biological Resources Element policies.

- **Policy 1.9.15** Maintain open spaces to protect life and property from flooding, landslide and other environmental hazards, where these cannot be mitigated, in accordance with the Utilities, Flooding and Seismic Safety Elements.

- **Policy 1.28.1** Implement public infrastructure and service improvements necessary to support land uses accommodated by the Land Use Plan (as defined in the Circulation, Utilities and Public Facilities, and Services Elements of the General Plan).

Figure 2.1-1: Regional Location Map

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Figure 2.1-2: Local Vicinity Map

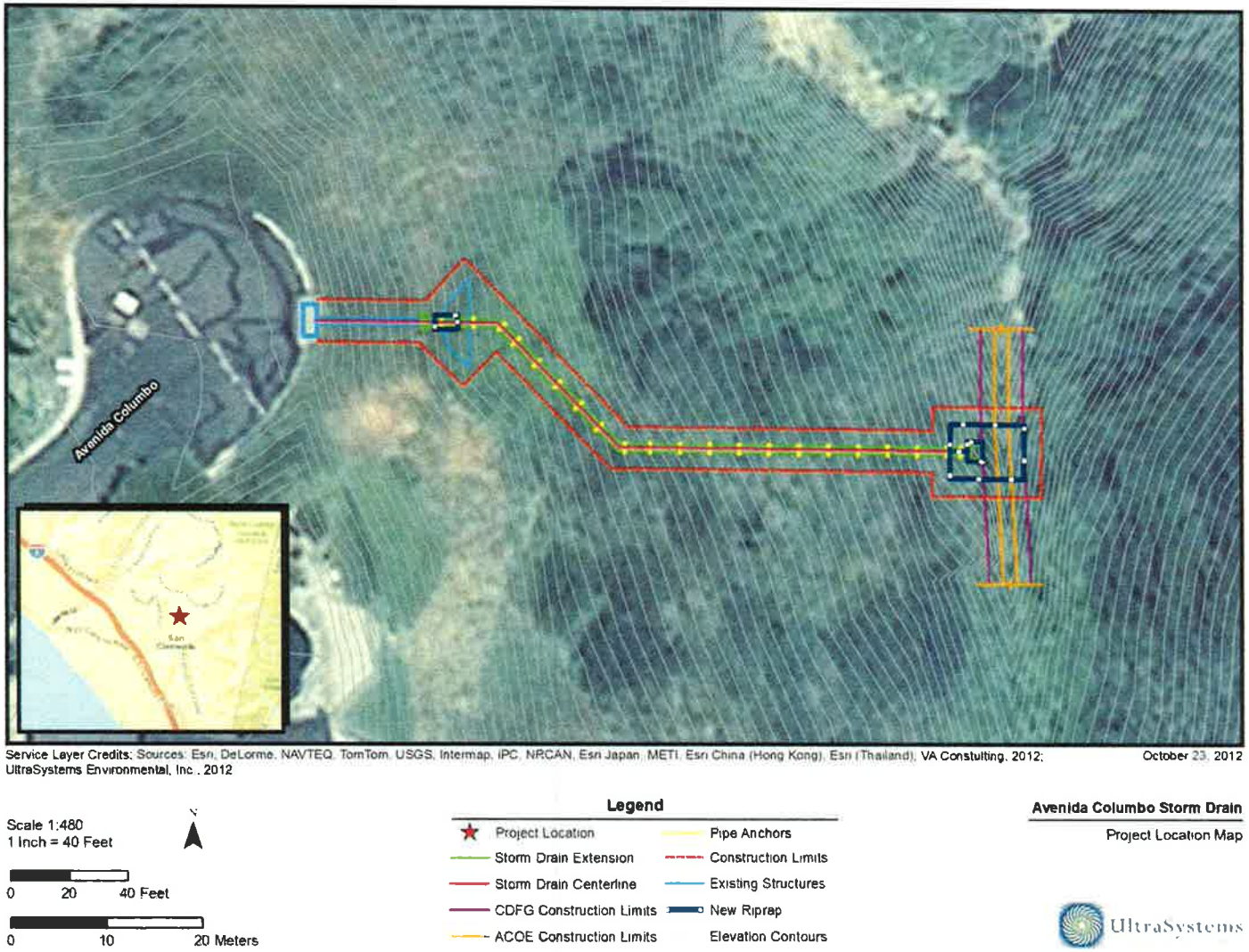

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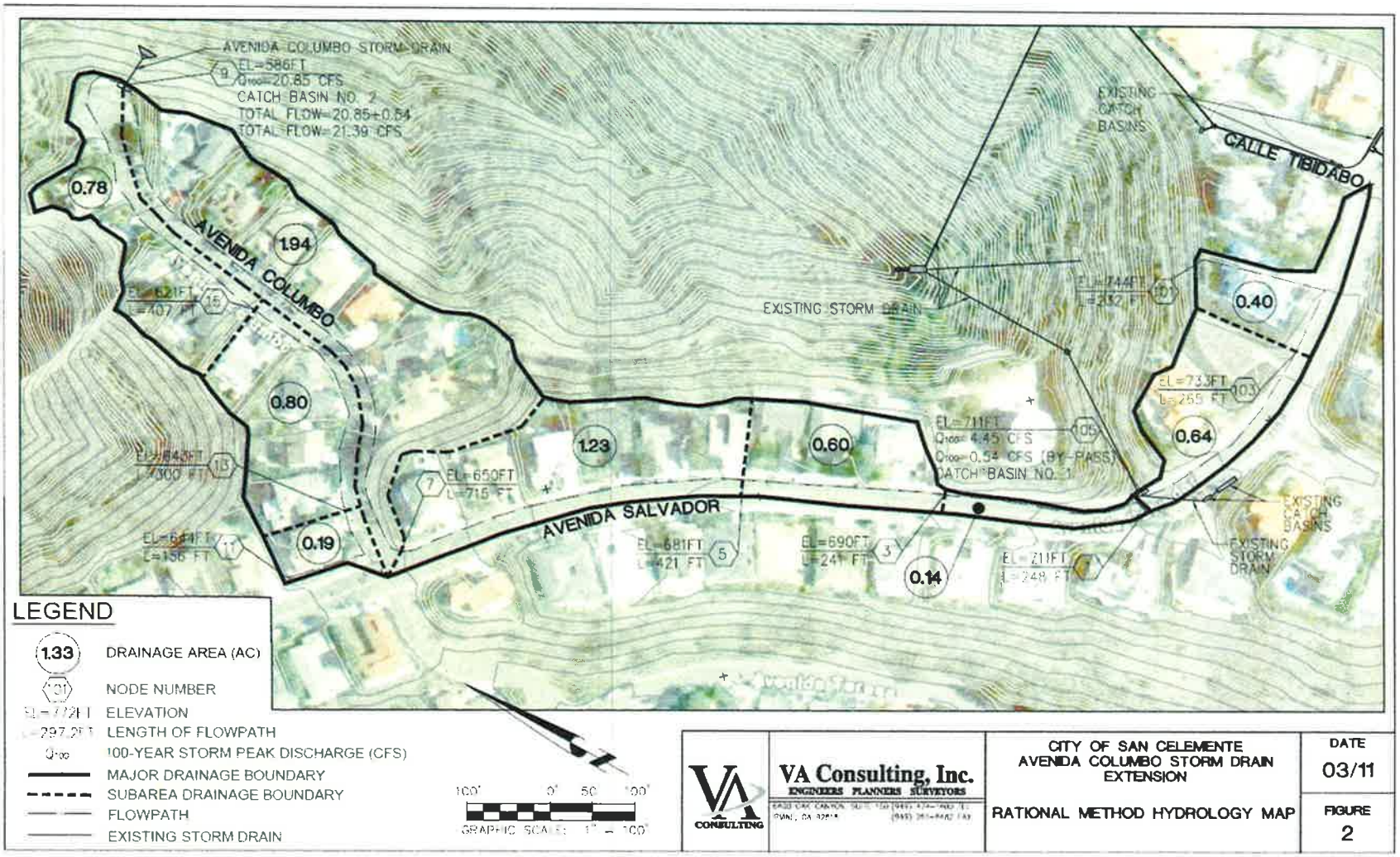
Figure 2.1-3: Hydrology Map



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Section 2.3 Construction Overview

Construction of the proposed project is anticipated to commence in December 2012, and will take approximately 30 days to complete. It is expected that there will be a crew of five (5) construction workers on site at any given time during construction. The new pipe will be lifted by a crane in-place and lowered into position using sled-tracks, with a winch system during construction.

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3.0 ENVIRONMENTAL CHECKLIST FORM

Section 3.1 INTRODUCTION

Project Title:

Avenida Columbo Storm Drain Extension Project

Lead Agency:

City of San Clemente
910 Calle Negocio, Ste. 100
San Clemente, CA 92673

Contact Person/Telephone No.:

Amir K. Ilkhanipour, P.E.
(949) 361-6140

Project Proponent and Address:

City of San Clemente
910 Calle Negocio, Ste. 100
San Clemente, CA 92673

Contact Person/Telephone No.:

Amir K. Ilkhanipour, P.E.
(949) 361-6140

Project Location:

End of the Avenida Columbo cul-de-sac in San Clemente.

Existing General Plan Designation:

The western portion of the project site is designated RVL (Residential, Very Low) 1.0 Unit/20 Gross Acres and the eastern portion of the project site is designated OS2 (Privately Owned Open Space).

Existing Zoning Classification:

The western portion of the project site is zoned RVL-IC (Residential, Very Low) 1.0 Unit/20 Gross Acres and the eastern portion of the project site is zoned RL-1 (Residential, Low) 4.5 Units/Gross Acres (7.0 Units/Net Acre).

EXISTING SETTING

Existing Site Conditions:
There is an existing 24-inch High Density Polyethylene (HDPE) storm drain on site that runs underground and extends approximately 46 feet from the upstream catch basin, at the end of the Avenida Columbo cul-de-sac, down the canyon slope, and outlets on the hillside into an existing concrete outlet structure. The existing pipe does not extend to the bottom of the canyon.

In the existing condition, runoff from the upstream areas of the development travel downstream from Avenida Salvador to the inlet on Avenida Columbo. There is a flow-by catch basin on Avenida Salvador approximated 420 feet south of the intersection with Avenida Columbo. Any flow that by-passes this catch basin will flow downstream to the Avenida Columbo catch basin. The watershed tributary to the Avenida Columbo inlet includes both sides of Avenida Columbo

up to the intersection with Avenida Salvador, as well as the north eastern half of Avenida Salvador from Avenida Columbo to the existing flow-by catch basin.

Surrounding Land Uses:
The project site is located on a steep slope and is surrounded by open space to the north, west and east, with single-family homes to the south. Uses within the project vicinity are entirely residential.

PROJECT DESCRIPTION
The proposed project will extend the existing 24" HDPE storm drain line by connecting a new, above-ground 24" High Density Polyethylene (HDPE) pipe. The new pipe will extend approximately 175 feet from the existing pipe to the bottom of the canyon. Drainage that flows through the new pipe will be collected in an energy dissipater outlet structure consisting of a precast concrete vault that discharges to a riprap apron. Flow will be dispersed within the canyon bottom, then traverse through canyon vegetation, before it drains into a flood control facility.

The new pipe will be held in place by pipe anchors at 17 feet on center per Caltrans Standard Plan D87A or D87B. The 100-year flow rate in the new pipe is approximately 5-inches deep with a velocity of 40 fps. The proposed energy dissipater will reduce flow velocities to non-erosive level prior to flow reaching the natural canyon areas. The plans call for a 12-foot wide construction limit for clearing, which equates to 6 feet on either side of the center line of the proposed pipe extension. Clearing will mostly affect vegetation since the new pipe is above ground. There will be approximately 20 cubic yards of excavation for the placement of the riprap and the energy dissipater structure.

Construction of the proposed project is anticipated to commence in January 2013 and will take approximately 30 days to complete. It is expected that there will be a crew of five construction workers on site at a time. The new pipe will be lifted by a crane in-place and lowered into position using sled-tracks with a winch.

Section 3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

DETERMINATION. On the basis of this initial evaluation:

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

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

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

4. I find that the proposed project **may have a "potentially significant impact" or "potentially significant unless mitigated impact"** on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed. ☐

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

Project Manager: Amir A. Ilkhanipour _____ Date _____

Planning Manager: Jim Pechous _____ Date _____

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Section 3.3 EVALUATION OF ENVIRONMENTAL IMPACTS:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved. A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards.

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

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

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

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

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

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

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

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

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

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

9. The explanation of each issue should identify:

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

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

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4.0 CHECKLIST OF ENVIRONMENTAL IMPACT ISSUES:

Section 4.1 AESTHETICS. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
(c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The project site is located approximately 0.90 mile from Avenida Pico, a roadway that has been designated as a major urban corridor, according to the City General Plan. An urban corridor, as defined in the General Plan, is a roadway with a formal character which acts as a spine to the urban areas of the community. Since the proposed project would occur in a canyon approximately 0.90 mile from the closest scenic vista, it does not have the potential to affect the scenic integrity of Avenida Pico.

b) **No Impact.** The project site is not located within an officially designated California state scenic highway. State Route 1, otherwise known as Pacific Coast Highway, located approximately 1.75 miles from the project site, is an eligible state scenic highway, but is not currently officially designated. Therefore, the project would not substantially damage scenic resources within a state scenic highway.

c) **Less Than Significant Impact.** The project site is located at the end of an urbanized residential neighborhood hillside cul-de-sac, and is surrounded by open space to the north, east and west, and residential developments to the south. Views of distant hills and surrounding residential neighborhood are visible from the project site.

The proposed project would extend an existing storm drain, and is visually consistent with the existing site and its surroundings. Since the proposed project would go down a canyon slope, it would not obstruct views of distant hills or residential neighborhoods. Therefore, the proposed project would result in a less than significant impact on the existing visual character and quality of the site and its surroundings.

d) **No Impact.** Existing light and glare sources within the proposed project area includes lighting from residences and street lights. The proposed project would extend an existing storm drain, which is located at the end of a cul-de-sac. The storm drain extension would not create a new source of substantial light or glare. Therefore, the design of the proposed project would not adversely affect day or nighttime views within the area.

Section 4.2 AGRICULTURE & FOREST RESOURCES. (In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.) In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.) *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
(d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The proposed project site is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, no farmland would be converted to non-agriculture use, and no impact would occur. No mitigation is required.

b) **No Impact.** There is no agricultural zoning associated with the proposed project site. The proposed project site does not have a Williamson Act contract in place and is not on land within an Orange County Agricultural preserve. Therefore, there will be no conflict with existing zoning for agricultural use or a Williamson Act contract, and no mitigation is required.

c) **No Impact.** There is no forest land zoning, timberland, nor timberland-zoned Timber Production associated with the proposed project site. Therefore, there is no conflict with existing zoning for, or cause for rezoning of forest land, timberland or timberland-zoned for Timberland Production, and no mitigation is required.

d) **No Impact.** The proposed project site does not contain forest land. Therefore, no loss of forest land will occur, and no mitigation is required.

e) **No Impact.** As discussed in item 4a above, there is no Farmland at the proposed project site. Therefore, the proposed project will not involve any changes that could result in conversion of Farmland to non-agricultural use and no mitigation is required.

Section 4.3 AIR QUALITY. (Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.) *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
(d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
(e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion

Regulatory Setting and Existing Air Quality

The proposed project lies within the City of San Clemente, which is in the South Coast Air Basin (SCAB). The SCAB includes all of Orange County, the non-desert portions of Los Angeles County, most of Riverside County, and the western portion of San Bernardino County, including portions of what was previously known as the Southeast Desert Air Basin. The neighboring areas include Camp Pendleton to the southeast, the City of Dana Point to the northwest, and the Pacific Ocean to the southwest.

Pollutants of Concern – Criteria Pollutants

This evaluation addresses criteria pollutants that may be emitted during project construction and/or operation. "Criteria pollutants" are those for which ambient air quality standards have been set or are precursors to those having ambient air quality standards.

The criteria pollutants of concern are nitrogen oxides, carbon monoxide, particulate matter, hydrocarbons, ozone, sulfur dioxide, and lead. For these pollutants, both federal and State ambient air quality standards (as maximum concentration levels of pollutants) have been established to protect public health and welfare. Since the proposed project has no significant sources of emissions of sulfur dioxide or lead, they are not discussed in this analysis. Presented below are descriptions of the criteria pollutants of concern and their known health effects.

Nitrogen Oxides (NO_x)

Nitrogen oxides serve as integral participants in the process of photochemical smog production. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless

gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown pungent gas formed by the combination of NO and oxygen. NO_2 acts as an acute respiratory irritant and eye irritant, and increases susceptibility to respiratory pathogens. A third form of NO_x, nitrous oxide (N_2O), is a GHG, and is discussed in **Section 4.7**, Greenhouse Gas Emissions.

Carbon Monoxide (CO)

Carbon monoxide (CO) is a colorless, odorless non-reactive pollutant produced by incomplete combustion of carbon substances (e.g., gasoline or diesel fuel). The primary adverse health effect associated with CO is its binding with hemoglobin in red blood cells, which decreases the ability of these cells to transport oxygen throughout the body. Prolonged exposure can cause headaches, drowsiness or equilibrium, and high concentrations are lethal.

Particulate Matter (PM)

Particulate matter (PM) consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes and mists. Two forms of fine particulate are now regulated. Respirable particles, or PM_{10}, include that portion of the particulate matter with an aerodynamic diameter of 10 micrometers (i.e., 10 millionths of a meter or 0.0004 inch) or less. Fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 micrometers (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on the arid landscape also contributes substantially to the local particulate loading. Fossil fuel combustion accounts for a significant portion of $PM_{2.5}$. In addition, particulate matter forms in the atmosphere through reactions of NO_x and other compounds (such as ammonia) to form inorganic nitrates. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in those persons who are naturally sensitive or susceptible to breathing problems.

Hydrocarbons (HC)

Hydrocarbons (HC) are compounds comprised primarily of atoms of hydrogen and carbon. Total organic gases (TOG) and reactive organic gases (ROG) are the two classes of HC whose emissions are inventoried by the California Air Resources Board (CARB) and the South Coast Air Quality Management District (SCAQMD). ROG have relatively high photochemical reactivity. The principal nonreactive HC is methane (CH_4), which is also a greenhouse gas (See **Section 4.7**). The major source of ROG is the incomplete combustion of fossil fuels in internal combustion engines. Other sources of ROG include the evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products. Adverse effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants. ROG are also transformed into organic aerosols in the atmosphere, contributing to higher levels of fine particulate matter and lower visibility. The term "ROG" is used by the CARB for air quality analysis, and is defined the same as the federal term "volatile organic compound" (VOC).

Ozone (O_3)

Ozone is a secondary pollutant produced through a series of photochemical reactions involving ROG and NO_x. O_3 creation requires ROG and NO_x to be available for approximately three hours in a stable atmosphere with strong sunlight. Because of the long reaction time, peak ozone concentrations

frequently occur downwind of the sites where the precursor pollutants are emitted. Thus, O_3 is considered a regional, rather than a local, pollutant. The health effects of O_3 include eye and respiratory irritation, reduction of resistance to lung infection, and possible aggravation of pulmonary conditions in persons with lung disease. O_3 is also damaging to vegetation and untreated rubber.

Meteorology and Climate

Air quality is affected by both the rate and location of pollutant emissions, and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions, such as wind speed, wind direction and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around its remaining perimeter. The region lies in the semi-permanent high pressure zone of the eastern Pacific Ocean, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.[1]

The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. An upper layer of dry air that warms as it descends characterizes high-pressure systems, such as the semi-permanent high-pressure zone in which the SCAB is located. This upper layer restricts the upward movement of cooler marine-influenced air near the ground surface and results in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog.

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 mph, smog potential is greatly reduced.

The climatological station closest to the site is the San Juan Canyon Station (Latitude 33.53194, Longitude -117.5525),[2] which is approximately 7 miles northeast of the project site (Latitude 33.4355, Longitude -117.6015). The annual average temperature recorded at this station is 63.1 degrees Fahrenheit (˚F), with the average temperature of 72.0˚F during the summer and 54.0˚F during winter.[3] Precipitation in the area averages approximately 12.34 inches annually, and occurs mostly during the winter and infrequently during the summer.[4]

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1 This section is based largely upon South Coast Air Quality Management District, CEQA Air Quality Handbook. Diamond Bar, California. 1993. Updated 2006.

2 Location information from National Oceanographic and Atmospheric Administration, National Climate Data Center, http://www.ncdc.noaa.gov/oa/climate/normals/norminv.txt (Accessed October 1, 2012).

3 "Anaheim, California. Period of Record Monthly Climate Summary." Western Region Climate Center, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0192 (Accessed October 1, 2012).

4 "Anaheim, California. Period of Record Monthly Climate Summary." Western Region Climate Center, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0192 (Accessed October 1, 2012).

The SCAQMD has also published guidance on determining the localized significance of emissions from construction activities.[5] **Table 4.3-1**, *SCAQMD Ambient Air Quality Significance Thresholds for Construction*, shows the significance thresholds, which are expressed as short-term ambient concentrations. SCAQMD has prepared lookup tables that use the concentration-based thresholds to back-calculate emission rates from various sized projects, to indicate significant emission rates presumed to satisfy the ambient thresholds. These lookup tables are applicable for construction projects that affect less than 5 acres on any given day.

Table 4.3-1 – SCAQMD Ambient Air Quality Significance Thresholds for Construction

Pollutant	Averaging Time	Threshold Concentration
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm
Respirable Particulate Matter (PM_{10})	24 hours	10.4 µg/m³
Fine Particulate Matter ($PM_{2.5}$)	24 hours	10.4 µg/m³
Carbon Monoxide (CO)	1 hour	20 ppm
	24 hours	9.0 ppm

Source: "SCAQMD Air Quality Significance Thresholds." 2009. Diamond Bar, CA: South Coast Air Quality Management District, www.aqmd.gov/ceqa/handbook/signthres.pdf. March 2009. Accessed August 19, 2009.

Regional Air Quality

Table 4.3-2, *Federal and State Attainment Status for the South Coast Air Basin*, summarizes the SCAB's attainment status for criteria pollutants. The Basin is nonattainment for the federal ozone (O_3), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) ambient air quality standards. The SCAB is a maintenance area for CO and NO_2, which means that, although the Basin has achieved compliance with the National Ambient Air Quality Standards (NAAQS) for those pollutants, control strategies that were used to achieve compliance must continue. The attainment status for the California Ambient Air Quality Standards (CAAQS) is similar to that for the NAAQS, except that the Basin is non-attainment for the California 1-hour NO_2 standard.

[5] Chico, T., et al., Final Localized Significance Threshold Methodology. Diamond Bar, California: South Coast Air Quality Management District. June 2003.

Table 4.3-2 – Federal and State Attainment Status for the South Coast Air Basin

Pollutants	Federal Classification	State Classification
Ozone (O_3)	Non-Attainment (Extreme)	Non-Attainment
Particulate Matter (PM_{10})	Non-Attainment (Serious)	Non-Attainment
Fine Particulate Matter ($PM_{2.5}$)	Non-Attainment	Non-Attainment
Carbon Monoxide (CO)	Maintenance	Attainment
Nitrogen Dioxide (NO_2)	Maintenance	Non-Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment

Source: U.S. Environmental Protection Agency, "California 8-Hour Ozone Nonattainment Areas (1997 Standard)." Green Book. Internet URL: www.epa.gov/air/oaqps/greenbook/ca8.html. Updated July 2012. Last accessed: October 2, 2012; U.S. Environmental Protection Agency, "Particulate Matter (PM-10) Nonattainment State/Area/County Report As of July 20, 2012." Green Book. Internet URL: http://www.epa.gov/air/oaqps/greenbook/pncs.html#CALIFORNIA. Last accessed: October 2, 2012; U.S. Environmental Protection Agency, "Particulate Matter (PM-2.5) 2006 Standard Nonattainment State/Area/County Report as of July 20, 2012." Green Book. Internet URL: http://www.epa.gov/air/oaqps/greenbook/rncs.html#CALIFORNIA. Last accessed: October 2, 2012; California Air Resources Board, "Area Designations Maps/State and National." Internet URL: http://www.arb.ca.gov/desig/adm/adm.htm. Last accessed October 2, 2012.

Local Air Quality

A network of ambient air monitoring stations is operated throughout the SCAB, and San Diego County Air Basin (SDCAB). The monitoring stations aim to measure ambient concentrations of criteria pollutants. The nearest ambient monitoring station to the proposed project site (approximately 13 miles away) is the Camp Pendleton Station[6] in Camp Pendleton, which measures O_3, $PM_{2.5}$, PM_{10} and NO_2. The nearest station that monitors CO is the Anaheim Station,[7] and the nearest station that monitors SO_2 is the Costa Mesa Station.[8] Ambient pollutant concentrations measured at the Camp Pendleton monitoring station in 2009-2011 are presented in **Table 4.3-3**, *Ambient Criteria Pollutant Concentration Data for Camp Pendleton*. During the three-year period, the following ambient air quality standards were exceeded at least once: 8-hour CAAQS and 8-hour NAAQS for O_3; 24-hour CAAQS for PM_{10}; and 24-hour NAAQS for $PM_{2.5}$.

[6] The address for the station is 21441 W. B St., Camp Pendleton, CA 92019.
[7] The address for the station is 1630 Pampas Ln., Anaheim, CA 92802.
[8] The address for the station is 2850 Mesa Verde Dr. East, Costa Mesa, CA 92626.

Table 4.3-3 – Ambient Criteria Pollutant Concentration Data for Camp Pendleton

Air Pollutant	Standard / Exceedance	21441 W. B Street, Camp Pendleton, CA 92019		
		2009	2010	2011
Carbon Monoxide (CO)[1]	Year Coverage	97%	96%	95%
	Max. 1-hour Concentration (ppm)	2	1	ND
	Max. 8-hour Concentration (ppm)	2.73	1.98	2.08
	# Days > Federal 1-hour Std. of 35 ppm	0	0	0
	# Days > Federal 8-hour Std. of 9 ppm	0	0	0
	# Days > California 8-hour Std. of 9.0 ppm	0	0	0
Ozone (O_3)	Year Coverage	96%	98%	93%
	Max. 1-hour Concentration (ppm)	0.090	0.092	0.085
	Max. 8-hour Concentration (ppm)	0.077	0.079	0.071
	# Days > Federal 8-hour Std. of 0.075 ppm	1	1	0
	# Days > California 1-hour Std. of 0.09 ppm	0	0	0
	# Days > California 8-hour Std. of 0.07 ppm	5	1	2
Nitrogen Dioxide (NO_2)	Year Coverage	85%	88%	85%
	Max. 1-hour Concentration (ppm)	0.068	0.081	0.066
	Annual Average (ppm)	0.010	0.008	0.007
	# Days > California 1-hour Std. of 0.18 ppm	0	0	0
Sulfur Dioxide[2] (SO_2)	Year Coverage	95%	93%	46%
	Max. 24-hour Concentration (ppm)	0.004	0.002	0.002
	Annual Average (ppm)	0.001	0.000	ND
	# Days > California 24-hour Std. of 0.04 ppm	0	0	0
Respirable Particulate Matter (PM_{10})[3]	Year Coverage	0%	97%	99%
	Max. 24-hour Concentration ($\mu g/m^3$)	97.4	43.0	53.0
	#Days > Fed. 24-hour Std. of 150 $\mu g/m^3$	0.0	0.0	0.0
	#Days > California 24-hour Std. of 50 $\mu g/m^3$	ND	ND	12.2
	Annual Average ($\mu g/m^3$)	25.1	22.5	24.9
Fine Particulate Matter ($PM_{2.5}$)	Year Coverage	39%	23%	14%
	Max. 24-hour Concentration ($\mu g/m^3$)	29.5	27.3	30.7
	State Annual Average ($\mu g/m^3$)	ND	ND	ND
	#Days > Fed. 24-hour Std. of 35 $\mu g/m^3$	1.0	0.0	ND
	Federal Annual Average ($\mu g/m^3$)	9.5	8.0	ND

Source:
California Air Resources Board, "iADAM Air Quality Data Statistics." Internet URL: http://www.arb.ca.gov/adam/ (October 1, 2012)
South Coast Air Quality Management District, "Historical Data by Year." Internet URL: http://www.aqmd.gov/smog/historicaldata.htm (October 1, 2012)
[1]The Camp Pendleton monitoring station does not monitor for CO. The closest monitor that does is located in Anaheim (1630 Pampas Ln., Anaheim, CA 92802).
[2]The Camp Pendleton monitoring station does not monitor for SO_2. The closest monitor that does is located in Costa Mesa (2850 Mesa Verde Dr. East, Costa Mesa, CA 92626).
[3]The Camp Pendleton monitoring station lacks PM_{10} data. The closest monitor that does provide PM_{10} data is located in Anaheim (1630 Pampas Ln., Anaheim, CA 92802).

Sensitive Receptors

Sensitive receptors are persons who would be more susceptible to air pollution than the general population, such as children, athletes, the elderly and the chronically ill. Examples of land uses where substantial numbers of sensitive receptors are often found are schools, daycare centers, parks, recreational areas, medical facilities, nursing homes and convalescent care facilities. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended times, resulting in sustained exposure to pollutants. Currently, the closest sensitive receptor to the proposed project is a single-family resident, approximately 129 feet west of the proposed project site.

Air Quality Plans

The Federal Clean Air Act (CAA) requires each state to prepare, update and execute a state implementation plan (SIP), which describes how the state will achieve attainment with ambient air quality standards. The SIP is not a single document, but rather a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls.[9] Local air districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to the U.S. Environmental Protection Agency (USEPA) for approval and publication in the Federal Register.[10] Once a provision is in a USEPA-approved SIP, it is federally enforceable.[11]

The SCAQMD is presently being guided by the following portions of the California State Implementation Plan (SIP):

- 2007 Ozone SIP
- 2007 PM2.5 SIP
- 2007 CO SIP (Maintenance Plan)
- 2007 NO2 SIP (Maintenance Plan)
- 2003 PM10 SIP

The most recently approved Air Quality Management Plan (AQMP) was adopted by the SCAQMD Governing Board on June 1, 2007 and revised in October 2007. The 2007 AQMP projects attainment of the federal 8-hour O_3 and 24-hour $PM_{2.5}$ standards by 2023 and 2014, respectively. However, to meet those targets, it is necessary to supplement the identified control measures with undefined long-term ("black box") measures that will reduce emissions by approximately 27 tons per day of VOC and 190 tons per day of NO_x).[12] Given the uncertainty in its ability to find effective black box measures, the SCAQMD Board asked CARB to request of USEPA that the federal 8-hour ozone classification be changed to "extreme," which would modify

9 California Air Resources Board, "State Implementation Background." Internet URL: http://www.arb.ca.gov/planning/sip/background.htm. Accessed March 21, 2011.

10 Ibid.

11 U.S. Environmental Protection Agency, "Availability of Federally-Enforceable State Implementation Plans for All States." *Federal Register* 75(226):71548-7150 (November 24).

12 South Coast Air Quality Management District (SCAQMD). *Final 2007 Air Quality Management Plan.* Diamond Bar, California (June 2007), p. 341.

the attainment deadline to June 15, 2024.[13] When CARB submitted the October 2007 version of the AQMP to USEPA as a SIP revision, it concurred with the SCAQMD's request for reclassification of the 8-hour ozone status from severe 17 to extreme.[14] On May 5, 2010, USEPA granted the request.[15]

Impact Analysis

a) **Less Than Significant Impact.** The proposed project will not conflict with or obstruct implementation of the applicable air quality plan.

The SCAQMD has established an AQMP that proposes policies and measures to achieve federal and state standards for healthful air quality in the SCAB. The most recently approved AQMP was adopted by the SCAQMD Board of Directors on June 1, 2007.

The AQMP incorporates land use assumptions from local general plans and regional growth projections developed by Southern California Association of Governments (SCAG) to estimate stationary and mobile source air emissions associated with projected population and planned land uses. If the proposed land use is consistent with the local general plan, then the impact of the project is presumed to have been accounted for in the AQMP. This is because the land use and transportation control sections of the AQMP are based on the SCAG regional growth forecasts, which incorporated projections from local general plans.

Another measurement tool in determining consistency with the AQMP is to determine whether a project would generate population and employment growth and, if so, whether that growth would exceed the growth rates forecasted in the AQMP and how the project would accommodate the expected increase in population or employment.

The proposed use is consistent with the existing land use designation specified in the City's General Plan per **Section 4.10**, Land Use/Planning. In addition, the proposed project will not introduce any new residents; hence, the proposed project is not considered growth or population-inducing on a regional scale. Therefore, the proposed project will not conflict with or obstruct the implementation of the AQMP. The impact will be less than significant.

b) **Less Than Significant Impact.** The proposed project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

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[13] South Coast Air Quality Management District (SCAQMD). "A Resolution of the Governing Board of the South Coast Air Quality Management District certifying the Final Program Environmental Impact Report for the 2007 Air Quality Management Plan, adopting the Final 2007 Air Quality Management Plan (AQMP), to be referred to after adoption as the Final 2007 AQMP, and to fulfill U.S. EPA Requirements for the use of emission reductions from the Carl Moyer Program in the State Implementation Plan." Resolution No. 07-9, Diamond Bar, California (June 1, 2007).

[14] Letter from James N. Goldstene, California Air Resources Board, Sacramento, California to Wayne Nastri, U.S. Environmental Protection Agency, Region 9, San Francisco, California (November 28, 2007).

[15] "Designation of Areas for Air Quality Planning Purposes; California; San Joaquin Valley, South Coast Air Basin, Coachella Valley, and Sacramento Metro 8-Hour Ozone Nonattainment Areas; Reclassification." *Federal Register* 75(86):24409-24421 (May 5, 2010).

As required by the CAA and the California Clean Air Act (CCAA), NAAQS have been established for six major air pollutants. These pollutants, known as criteria pollutants, are: nitrogen dioxide (NO_2), carbon monoxide (CO), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2) and lead (Pb). The State of California has also established ambient air quality standards, known as the California Ambient Air Quality Standards (CAAQS). These standards are generally more stringent than the corresponding federal standards and include additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

Both state and federal standards are summarized in **Table 4.3-4**, *Ambient Air Quality Standards for Criteria Pollutants*. The primary standards have been established to protect the public health. The secondary standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation and other aspects of the general welfare.

Table 4.3-4 – Ambient Air Quality Standards for Criteria Air Pollutants

Pollutant	Averaging Time	California Standards[a]		Federal Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	15 µg/m³		
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	—
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m³)		0.1 ppm (188 µg/m³)	None	
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	—	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	1 Hour[h]	0.25 ppm (655 µg/m³)		0.075 ppm (196 µg/m³)	—	
Lead[i]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[j]	—		0.15 µg/m³		

Pollutant	Averaging Time	California Standards[a]		Federal Standards[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer–visibility of 10 miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70%. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[i]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility reduction particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this Table refers to ppm by volume, or micromoles of pollutant per mole of gas.

Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by USEPA.

On June 2, 2010, the USEPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The USEPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm, effective August 23, 2010.

The CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

National lead standard, rolling 3-month average: final rule signed October 15, 2008.

California Air Resources Board, "Ambient Air Quality Standards." Internet URL: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. (September 8, 2010).

Significance Thresholds

The SCAQMD has developed criteria for determining whether emissions from a project are regionally significant. They are useful for estimating whether a project is likely to result in a violation of the NAAQS and/or whether the project is in conformity with plans to achieve attainment. The SCAQMD no longer has "indirect source" rules, e.g. rules that place restrictions on housing or commercial development, or require reductions in trip generation and/or vehicle miles traveled to developed commercial or industrial sites.[16] Instead, the District has published guidance on conducting air quality analyses under CEQA.[17] SCAQMD's significance thresholds are summarized in **Table 4.3-5**, *SCAQMD Emissions Thresholds for Significant Regional Impacts* for criteria pollutant emissions during construction activities and project operation. A project is considered to have a regional air quality impact if emissions from its construction and/or operational activities exceed the corresponding SCAQMD significance thresholds.

Table 4.3-5 – SCAQMD Emissions Thresholds for Significant Regional Impacts

Pollutant	Mass Daily Thresholds (Pounds/Day)	
	Construction	Operation
Nitrogen Oxides (NOx)	100	55
Volatile Organic Compounds (VOC)	75	55
Respirable Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55
Sulfur Oxides (SOx)	150	150
Carbon Monoxide (CO)	550	550
Lead	3	3

Source: "SCAQMD Air Quality Significance Thresholds." 2011. Diamond Bar, CA: South Coast Air Quality Management District, www.aqmd.gov/ceqa/handbook/signthres.pdf. March 2011. Accessed October 2, 2012.

Air Quality Methodology

Estimated air emissions from the project's on-site and off-site project activities were calculated using the California Emissions Estimator Model (CalEEMod™)[18] and by other methods described below. CalEEMod is a planning tool for estimating emissions related to land use projects. The model incorporates EMFAC2007 model's emission factors to estimate on-road vehicle emissions; and emission factors and assumptions from the CARB's OFFROAD2007 model to estimate off-road construction equipment emissions. Model-predicted project emissions are compared with applicable thresholds to assess regional air quality impacts.

[16] Two indirect source rules (1501 - Work Trip Reduction Plans and 1501.1 - Alternatives to Work Trip Reduction Plans) were repealed in 1995.

[17] South Coast Air Quality Management District, CEQA Air Quality Handbook. Diamond Bar, California. 1993. Updated 2006.

[18] *California Emissions Estimator Model (CalEEMod), Users Guide, Version 2011.1.* Prepared by ENVIRON International Corporation, Emeryville, California, for the South Coast Air Quality Management District, Diamond Bar, California (February 2011).

Regional Short-Term Air Quality Impacts

Project construction activities will generate short-term air quality impacts. Construction emissions can be distinguished as either on-site or off-site. On-site air pollutant emissions would principally consist of exhaust emissions from off-road heavy-duty construction equipment, as well as fugitive particulate matter from earth working and material handling operations. Off-site emissions would result from workers commuting to and from the job site, as well as from trucks hauling demolition and construction debris for disposal.

The proposed project would include site minimal preparation and clearing, minimal excavation, and construction of new High Density Polyethylene (HDPE) pipe and rip rap. Each construction phase involves the use of a different mix of construction equipment and therefore, has its own distinct emissions characteristics. A schedule of equipment use was set up to determine which equipment would be operated simultaneously. Construction-related emission estimates were based on the construction scenario of similar construction projects. Estimates of the types and numbers of pieces of equipment anticipated in each phase of construction and development were based on equipment requirements of similar construction projects. Pollutant emissions would vary from day to day depending on the intensity and type of construction activity.

Project construction emissions were estimated using the construction module of CalEEMod. For the analysis, the construction period would begin in early January 2013, and last for 30 days. Also, it was assumed that fugitive dust control measures required under SCAQMD Rule 403 would be implemented. The project construction contractor must follow applicable SCAQMD regulations regarding control of fugitive dust emissions during the project's construction. Equipment exhaust emissions were determined using CalEEMod's default values for horsepower and load factors, which are from the CARB's OFFROAD2007 model. The estimated emissions are presented in **Table 4.3-6**, *Maximum Daily Construction Emissions (Unmitigated)*.

Table 4.3-6 – Maximum Daily Construction Emissions (Unmitigated)

Construction Activity	Maximum Emissions (lbs/day)				
	ROG	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum Cumulative	1.71	11.33	7.24	0.69	0.69
Construction Activities Corresponding to Maximum (Construction Year)	Pipe Construction (2013)	Pipe Construction (2013)	Pipe Construction (2013)	Pipe Construction (2013)	Pipe Construction (2013)
SCAQMD Significance	*75*	*100*	*550*	*150*	*55*
Significant (Yes or No)	**No**	**No**	**No**	**No**	**No**

Source: Calculated by UltraSystems with CalEEMod (Version 2011.1).

Emissions of all criteria pollutants are below the SCAQMD's significance thresholds. Therefore, the regional impacts of construction emissions will be temporary and less than significant.

Regional Long-Term Air Quality Impacts

The proposed project is a HDPE pipe extension of to the existing catch basin at the end of the Avenida Columbo cul-de-sac. Because the proposed project will not generate additional traffic beyond the existing conditions, nor does it emit direct criteria pollutant emissions, the proposed project will have no long-term impacts to the regional air quality.

c) **Less Than Significant Impact.** The proposed project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

No other nearby construction projects are planned during the 30-day construction period of the proposed project.[19] Additionally, the project will produce no operational emissions as described in the above section. Therefore, based on Table 4.3-6 in the above section, the proposed project will not result in a cumulatively considerable net increase of any criteria pollutant in non-attainment, and is less than significant.

d) **Less Than Significant Impact.** The proposed project will not expose sensitive receptors to substantial pollutant concentrations.

Localized Short-Term Air Quality Impacts

Construction of the proposed project would generate short-term and intermittent emissions. Although sensitive receptors would be exposed to diesel exhaust, which has been associated with lung cancer,[20] the duration of exposure would not be sufficient to result in a significant cancer risk. Carcinogenic health risk assessments are based upon an assumption of 70 years continuous exposure, while the exposure in the present case would be intermittent over a maximum of about 30 days. Therefore, no cancer health risk assessment was necessary. Acute noncancer risk assessments are based upon one-hour maximum exposures, but acute reference exposure levels (RELs) for diesel exhaust and diesel particulate matter have not been established by the Office of Environmental Health Hazard Assessment.[21]

A screening-level localized significance analysis of construction emissions was performed in accordance with SCAQMD procedures.[22] Note that the proposed project site is 0.08 acres;

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19 Personal communication from Tom Bonigut, City of San Clemente, San Clemente, California to Ben Wong, UltraSystems Environmental Inc., Irvine, California (September 27, 2012).

20 California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. May 1998. *Part B: Health Risk Assessment for Diesel Exhaust.*

21 California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, "All Acute Reference Exposure Levels developed by OEHHA as of August 2012. (www.oehha.ca.gov/air/acute_rels/allAcRELs.html).

22 Chico, T. and J. Koizumi, *Final Localized Significance Threshold Methodology.* South Coast Air Quality Management District, Diamond Bar, California (June, 2003).

therefore the one acre parameter was used during the analysis. Only on-site emission sources were included, and all three of the nearest sensitive receptors are single-family residents. As seen in **Table 4.3-7**, *Results of Localized Significance Screening Analysis*, localized impacts during construction and operation will be less than significant.

Table 4.3-7 – Results of Localized Significance Screening Analysis

Receptor (Address Number)	Pollutant	Distance From Receptor (m)	Calculated Emissions (lbs/day)	Threshold Emissions (lbs/day)	Exceeds Threshold (Yes or No)
Single Family Residential (719)	NO_x	39.3	11.16	91	No
	CO	39.3	7.06	696	No
	PM_{10}	39.3	0.68	4	No
	$PM_{2.5}$	39.3	0.68	3	No
Single Family Residential (725)	NO_x	47.2	11.16	91	No
	CO	47.2	7.06	696	No
	PM_{10}	47.2	0.68	4	No
	$PM_{2.5}$	47.2	0.68	3	No
Single Family Residential (715)[a]	NO_x	70.1	11.16	11	No
	CO	70.1	7.06	4	No
	PM_{10}	70.1	0.68	93	No
	$PM_{2.5}$	70.1	0.68	833	No

[a] 715 Avenida Columbo was compared to the threshold distance of 50 meters, while 719 and 725 were compared to the distance of 25 meters.

Source: UltraSystems Environmental Inc., 2011 using CalEEMod (Version 2011.1)

Localized Long-Term Air Quality Impacts

Exhaust emissions from motor vehicles can potentially cause a direct, localized hotspot impact at or near proposed developments or sensitive receptors. The optimum condition for the occurrence of a CO hotspot would be cool and calm weather at a congested major roadway intersection with sensitive receptors nearby, and where vehicles are idling or moving at a stop-and-go pace.

The significance of localized project impacts depends on whether project-related emissions result in a violation of state and/or federal CO standards. A significant impact would occur if the CO hotspot analysis of vehicular intersection emissions exposes sensitive receptors to concentrations that are in excess of the following thresholds:

- 20 parts per million (ppm) for 1-hour average, and/or
- 9 ppm for 8-hour average.

The South Coast Air Quality Management District considers project impacts to be significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more.[23]

Operation of the proposed project, however, would not increase local vehicle traffic, as the project involves the expansion of an existing storm drain pipe. Therefore, the localized CO concentrations will be less than significant.

e) **Less Than Significant Impact.** The proposed project will not create objectionable odors affecting a substantial number of people.

Construction activities for the proposed project would generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust). These emissions would occur during daytime hours only, and would be isolated to the immediate vicinity of the construction site and activity. Therefore, they would not affect a substantial number of people. When project construction is completed, odors from the proposed uses of the proposed project would be similar to those of the surrounding residential area; therefore, the following impact will be less than significant.

[23] South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook.* April.

Section 4.4 BIOLOGICAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

Impact Analysis

a) **Less than Significant With Mitigation Incorporated.** The project is within the Orange County Habitat Conservation Preserve (HCP) planning area. This planning area does contain designated habitat for the California Gnatcatcher and other special status species. The project will have direct impact via vegetation clearing in the small project area, however the project will have less than significant impacts through stabilizing the slope and conducting restoration of the project site post construction. Mitigation measures are discussed in the Biological Assessment (BA) which is included as **Appendix A.**

b) **Less than Significant With Mitigation Incorporated.** The project will clear native riparian vegetation on the lower hill slope around the bank of an intermittent stream and in the base of the arroyo. The project will impact vegetation by clearing areas in the stream when placing the fallout apron (rip rap). Mitigation measures are discussed in the BA which is included as **Appendix A.**

c) **Less than Significant With Mitigation Incorporated.** The project will place rock slope protection (RSP) (i.e., rip rap) at the base of the drain structure to dissipate entrainment forces. The

base of the drain is in an ACOE jurisdictional, intermittent stream channel, and has CDFG jurisdictional riparian vegetation along the bank. Mitigation measures are discussed in the BA which is included as **Appendix A.**

d) **Less than Significant With Mitigation Incorporated.** The project design for an aboveground pipe may constrict the movement of terrestrial wildlife across the immediate project area; however, the small size of the project and the fact that it runs along a highly disturbed area and residential area allow for a less than significant level of impact with restoration of the project area. Mitigation measures are discussed in the BA which is included as **Appendix A.**

e) **Less than Significant With Mitigation Incorporated.** Orange County does have an HCP that includes open space in and around the City of San Clemente; however, the small scale of this project will not constitute a significant impact. Also, the project will aid in stabilizing an unstable area and preserve native habitat and open space in the process. Mitigation measures are discussed in the BA which is included as **Appendix A.**

f) **Less than Significant With Mitigation Incorporated.** The project is within the Orange County Habitat Conservation Preserve (HCP) planning area. This planning area does contain designated habitat for the California Gnatcatcher and other special status species. Mitigation measures are discussed in the BA which is included as **Appendix A.**

Section 4.5 CULTURAL RESOURCES. *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
(c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
(d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Impact Analysis

a&b) **Less than Significant With Mitigation Incorporated.** APRMI conducted a cultural resource archival record search for the project at the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC), located on the campus of California State University, Fullerton (CSUF) on October 1, 2012. The SCCIC is the comprehensive repository for cultural resources data for Orange County. Research consisted of a review of the USGS 7.5-Minute San Clemente, CA Topographic Quadrangle (USGS 1968, PR 1975) for any previously recorded cultural resources within a one-mile radius of the project area, and a review of 10 Mylar overlays for cultural resources investigations within a one-mile radius of the project area. The eastern edge of the one-mile radius around the project area is aligned with the San Diego County/Marine Corps Base Camp Pendleton boundary line, and thus, a records search was not conducted at the South Coastal Information Center (the comprehensive repository for cultural resources data for San Diego County) nor at Camp Pendleton.

The CHRIS search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest (CPHI) list, the California Historical Landmarks (CHL) list, the Archaeological Determinations of Eligibility (ADOE) list, the California State Historic Resources Inventory (HRI) list, and historic quadrangle maps. Historic maps and available aerial photographs (Historic Aerials 2012) were also reviewed.

The archaeological record and literature search revealed that the project area is within a region of high archaeological sensitivity that contains *unique* or *important* prehistoric sites, or prehistoric sites that qualified as *historical resources*. Many of these have been destroyed by development, and few remnants of these heritage resources remain in the area. The project area is on a slope of approximately 55 percent, which does not lend itself to long-term occupation, but rather to transitory use. This indicates that the archaeological sensitivity of the project area is moderate, as it is on terrain that was likely used for resource collecting/food processing and as an area of thoroughfare between more permanent settlements. Because of this sensitivity and because 100

percent of the project area could not be surveyed, it is recommended that archaeological resources monitoring services be required for any construction-related ground disturbance, including vegetation grubbing. Native American monitoring services are also recommended.

A full archaeological survey was not conducted because access to the project area entailed scaling down a steep grade of at least 55 percent. Vegetation cover also precluded the adequate archaeological survey of the project area.

The results of this study indicate that while no cultural resources were observed during the project area visit, the project area is located in an area highly sensitive for archaeological resources. Implementation of the following mitigation measures will reduce potential impacts to a less than significant level.

Mitigation Measures

CUL-1: Prior to initiation of any construction activities, the lead agency or project management team should consult and retain a qualified archaeologist to monitor construction activities. Continuous construction monitoring along with avoidance of any indicated locations of prehistoric sites will reduce potential cultural resource impacts to a less than significant level.

CUL-2: Since grubbing and excavation of the project area will disturb native soil, in terrain similar to areas that have been recorded as having archaeological resources (slopes and canyon bottoms), archaeological sites might still be uncovered during construction activities, in which case construction in that area must stop until the archaeologist assesses the resource and deems it safe for construction to continue. The archaeologist may recommend preservation of the site in place or may recommend data recovery. Native American monitoring services will also be required if sites or features are uncovered.

c) **Less than Significant Impact.** Duke Cultural Resources Management, LLC (DUKE CRM) has conducted a review of literature and records to determine the potential for paleontological resources to be encountered by excavation related to the proposed project. The project is shown on the geologic map of the San Clemente as located on the Capistrano Formation. Although the Capistrano Formation has high potential to contain significant paleontological resources, primarily marine fossils, the location of the project site along the Pacific coast has weathered the fossiliferous sediments to a depth beyond which the project will reach. The intense weathering and fracturing indicate that fossil remains, if recoverable, would not be recognizable, and therefore, not significant. Therefore, the project would result in a less than significant impact on a unique paleontological resource or site or unique geologic feature.

d) **Less than Significant with Mitigation Incorporated.** The discovery of human remains is always a possibility during construction-related disturbances, therefore the following mitigation measure is recommended to reduce potential impacts to a less than significant level.

Mitigation Measure

CUL-3: The State of California Health and Safety Code Section 7050.5 states that if human remains are discovered during construction, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98 which states that the Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Section 4.6 GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
(b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Impact Analysis

a) **Less Than Significant Impact.**

i) Earthquakes: The proposed project is not located on ground that is crossed by any known active faults. Therefore, the risk of exposure to people and structures due to rupture of a known earthquake is less than significant.

ii) Seismic-related ground shaking: The City of San Clemente and its sphere of influence are located within an area that is susceptible to strong ground shaking.[24] With adherence to design standards, the result of potential seismic-related impacts will be less than significant.

iii) Seismic-related ground failure, including liquefaction: Potential liquefaction occurrence in the City and Sphere of Influence area (SOI) is primarily limited to the valley bottoms and the shoreline areas. Likelihood of occurrence is directly related to strong seismic ground shaking potential, when water is shallower than 50 feet and where

[24] City of San Clemente General Plan. Accessed September 28, 2012.

sandy deposits are relatively loose and unconsolidated.[25] The proposed project is located on a hillside and not near a shoreline, and sandy deposits are not found on the project site. Therefore, the risk of seismic related ground failure relative to liquefaction is less than significant.

iv) Landslides: The site is situated adjacent to several off-site large scale landslides, but it is not located within the limits of any known recent landslides. A large ancient landslide has been mapped by previous geotechnical consultants just beyond the edge of the cul-de-sac. The geotechnical report referenced herein recommends that the storm drain outlet be extended further down the slope (which is consistent with the proposed project) so as to prevent it from outletting onto the main portion of the previously mentioned landslide that was mapped by others.[26] Since this is not located within the limits of any known recent landslides, the risk of exposure to people and structures due to landslides is less than significant.

b) **Less Than Significant Impact.** Construction of the proposed project would expose project site soils during short-term project construction activities. However, the exposure of soils during the construction of the proposed project would be short-term and subject to the National Pollution Discharge Elimination Systems (NPDES) requirements. NPDES requirements include that "prior to construction initiation, activities shall be broken into phases. Construction scheduling should facilitate installation of erosion and sediment control measures prior to construction start, detail time limits for soil stabilization after grading occurs, and schedule BMP maintenance." With incorporation of these standards for design and construction, impacts from soil erosion or the loss of topsoil will be less than significant.

c) **Less Than Significant Impact.** The proposed project is not located on a geologic unit that would become unstable as a result of the project. Settling has occurred at the end of the cul-de-sac that is upstream from the proposed project; however, the referenced geotechnical report states that it is believed that the majority of the settlement associated with underlying fill and colluvium has already occurred at the end of the cul-de-sac. This fill that has mostly settled was placed during original site construction and not properly benched into bedrock. The geotechnical report did not note any potential concerns regarding lateral spreading. As previously mentioned, the geotechnical report notes that the proposed project is not located within the limits of any known recent landslides. As referenced in the City of San Clemente General Plan, the proposed project is not located in an area of significant liquefaction concern. Although the geotechnical report does not indicate stability issues for the project site itself, mitigation measures may be adopted if conditions are found to exist resulting from potential future settling of soil at the cul-de-sac area. Monitoring the site for settlement is recommended.

d) **Less Than Significant Impact.** The geotechnical report does not indicate potentially expansive soils on the project site. Clay soils were found in borings from the fill placed as part of the construction of the cul-de-sac where settling had occurred; however, no native expansive soils were indicated on the project site itself.

[25] City of San Clemente General Plan. Accessed September 28, 2012.
[26] Geotechnical Evaluation for the Last 60 Feet of Avenida Columbo Cul-de-Sac, City of San Clemente. Lawson and Associates Geotechnical Consultants. April 8, 2009.

e) **No Impact.** The proposed project will not generate wastewater with project implementation that will require the use of septic tanks or alternative wastewater systems. Therefore, no impact would result from the proposed project.

Section 4.7 GREENHOUSE GAS EMISSIONS. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
(b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

Greenhouse Gases

Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth and, therefore, contribute to the greenhouse effect and global warming. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels. GHGs are defined under the California Global Warming Solutions Act of 2006 (AB 32) as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Associated with each GHG species is a "global warming potential" (GWP), which is defined as the ratio of degree of warming to the atmosphere that would result from the emission of one mass unit of a given GHG compared with one equivalent mass unit of CO_2 over a given period of time. By this definition, the GWP of CO_2 is always 1. The GWPs of CH_4 and N_2O are 21 and 310, respectively.[27,28] "Carbon dioxide equivalent" (CO_2e) emissions are calculated by weighting each GHG compound's emissions by its GWP and then summing the products. Though HFCs, PFCs, and SF_6 are not emitted by project sources, they are discussed below for thoroughness.

Carbon Dioxide (CO_2)

Carbon dioxide (CO_2) is a clear, colorless and odorless gas. Fossil fuel combustion is the main human-related source of CO_2 emissions; electricity generation and transportation are first and second in the amount of CO_2 emissions, respectively. Carbon dioxide is the basis of GWP, and thus has a GWP of 1.

Methane (CH_4)

Methane (CH_4) is a clear, colorless gas, and is the main component of natural gas. Anthropogenic sources of CH_4 are fossil fuel production, biomass burning, waste management, and mobile and stationary combustion of fossil fuel. Wetlands are responsible for the majority of the natural

[27] *California Climate Action Registry General Reporting Protocol. Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1* (January 2009).

[28] These values were reported by the Intergovernmental Panel on Climate Change in 1995. Some GWP values have been updated since 1995 on the basis of improved calculation methods. The 1995 values continue to be used by international convention to maintain consistency in GHG reporting.

methane emissions.[29] As mentioned above, CH_4, within a 100-year period, is 21 times more effective in trapping heat than is CO_2.

Nitrous Oxide (N_2O)

Nitrous oxide (N_2O) is a colorless, clear gas, with a slightly sweet odor. N_2O has both natural and human-related sources, and is removed from the atmosphere mainly by photolysis, or breakdown by sunlight, in the stratosphere. The main human-related sources of N_2O in the United States are agricultural soil management (synthetic nitrogen fertilization), mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production.[30] Nitrous oxide is also produced from a wide range of biological sources in soil and water. Within a 100-year span, N_2O is 310 times more effective in trapping heat than is CO_2.[31]

Hydrofluorocarbons (HFCs)

Hydrofluorocarbons (HFCs) are greenhouse gases with a GWP that ranges from 140 to 11,700.[32] They are commonly used as refrigerants, aerosol propellants, solvents, and fire retardants. HFCs were developed to replace ozone depleting chemicals such as chlorofluorocarbons (CFCs). The major source of emissions from HFCs is their use as refrigerants in systems such as air conditioning units in vehicles and buildings. These gases are released into the atmosphere via leaks, servicing and disposal of equipment in which they are used.

Perfluorocarbons (PFCs)

Perfluorocarbons (e.g., CF_4, C_2F_6, C_3F_8) have a GWP that ranges from 6,500 to 9,200.[33] They are produced as by-products of various aluminum production processes and used to etch intricate circuitry features on semiconductors. Under normal operating conditions, anywhere from 10 to 80 percent of the PFC gases pass through the manufacturing tool chambers unreacted and are released into the atmosphere.[34]

Sulfur Hexafluoride (SF_6)

Sulfur hexafluoride (SF_6) has a GWP of 23,900.[35] Like PFCs, it is used in semiconductor manufacturing. SF_6 is also used in magnesium processing, as a tracer gas for leak detection, and in

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29 U.S. Environmental Protection Agency, "Methane." Climate Change Web Site. Internet URL: http://www.epa.gov/methane/. Updated April 1, 2011.

30 U.S. Environmental Protection Agency, "Nitrous Oxide." Climate Change Web Site. Internet URL: http://www.epa.gov/nitrousoxide/. Updated June 22, 2010.

31 Ibid.

32 U.S. Environmental Protection Agency, "F-gases Emissions." Climate Change Web Site. Internet URL: http://www.epa.gov/climatechange/ghgemissions/gases/fgases.html. Updated June 14, 2012.

33 Ibid.

34 U.S. Environmental Protection Agency, "Basic Information." PFC Reduction / Climate Partnership for the Semiconductor Industry, Internet URL: http://www.epa.gov/highgwp/semiconductor-pfc/basic.html. Updated March 25, 2008.

35 U.S. Environmental Protection Agency, "F-gases Emissions." Climate Change Web Site. Internet URL: http://www.epa.gov/climatechange/ghgemissions/gases/fgases.html. Updated June 14, 2012.

electrical transmission equipment in circuit breakers. The compound is typically released into the atmosphere through aging equipment and during equipment maintenance and servicing.

Impacts of Climate Change

Global temperatures are expected to continue to rise as human activities continue to add the aforementioned greenhouse gases to the atmosphere. The Earth's average surface air temperature has increased by more than 1.4°F from 1900 to 2000.[36] The warmest global average temperatures on record have all occurred within the past 10 years, with the warmest being 2005 and 2010.[37]

Most of the U.S. is expected to experience an increase in average temperature. Precipitation changes, which are very important to consider when assessing climate change effects, are more difficult to predict. Whether rainfall will increase or decrease remains difficult to project for specific regions.[38] The extent of climate change effects, and whether these effects prove harmful or beneficial, will vary by region, over time, and with the ability of different societal and environmental systems to cope with or adapt to the change. Human health, natural ecosystems, agriculture, coastal areas and heating and cooling requirements are examples of climate-sensitive systems. Rising average temperatures are already affecting the environment. Some observed changes include thawing of permafrost; shrinking of glaciers; later freezing and earlier break-up of ice on bodies of freshwater; lengthening of growing seasons; shifts in plant and animal ranges; and earlier flowering of trees.[39, 40]

Human Health Impacts

Climate change may increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects, such as malaria, dengue fever, yellow fever and encephalitis.[41] Cholera, which is associated with algal blooms, could also increase. While these health impacts would largely affect tropical areas in other parts of the world, effects would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma or other lung diseases. Extreme heat events would also be expected to occur with more frequency and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply and food security more vulnerable.

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36 U.S. Environmental Protection Agency, "Climate Change Facts: Answers to Common Questions," Climate Change Web Site, Internet URL: http://www.epa.gov/climatechange/facts.html#ref3. Updated June 14, 2012.

37 Ibid.

38 Intergovernmental Panel on Climate Change, "Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change," Cambridge, United Kingdom. 2007.

39 Ibid.

40 U.S. Environmental Protection Agency, "Impacts & Adaptation," Climate Change Web Site, Internet URL: http://www.epa.gov/climatechange/impacts-adaptation/. Updated June 14, 2012.

41 U.S. Environmental Protection Agency, "Human Health Impacts & Adaptation," Climate Change Web Site, Internet URL: http://www.epa.gov/climatechange/impacts-adaptation/health.html. Updated June 14, 2012.

Ecosystem and Biodiversity Impacts

Climate change is expected to have effects on diverse types of ecosystems, from alpine to deep-sea habitat.[42] As temperatures and precipitation change, seasonal shifts in vegetation would occur; this could affect the distribution of associated fauna and flora species. As the range of species shifts, habitat fragmentation could occur, with acute impacts on the distribution of certain sensitive species. The Intergovernmental Panel on Climate Change (IPCC) states that "20 percent to 30 percent of species assessed may be at risk of extinction from climate change impacts within this century if global mean temperatures exceed 2 to 3°C (3.6 to 5.4°F) relative to pre-industrial levels."[43] Shifts in existing biomes could also make ecosystems vulnerable to encroachment by invasive species. Wildfires, which are an important control mechanism in many ecosystems, may become more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. In general, climate change is expected to put a number of stressors on ecosystems, with potentially catastrophic effects on biodiversity.

Sea Level Rise Impacts

The impact on global climate change as a result of anthropogenic activities can be seen in the increases in air and ocean temperatures, rising sea levels and widespread melting of snow and ice.[44] Eleven of the twelve years from 1995 through 2006 ranked among the warmest years of global surface temperature since 1850. Just as well, observations since 1961 showed that the ocean has been absorbing approximately 80% of the heat added to the global climate system. As a result, the warmer temperatures cause seawater expansion, thus increasing the volume and contributing to the rise in sea level. On average, global sea level has risen at a rate of 1.8 millimeters per year over 1961 to 2003. Additionally, the decrease in glaciers and ice caps as well as the decrease in ice sheets of Greenland and Antarctica has been shown to contribute to sea level rise.[45] Coastal regions are known to be climate-sensitive areas and sea level rise, as a result of climate change, could impact these coastal zones. Shoreline erosion, coastal flooding, and water pollution affect man-made infrastructure and coastal ecosystems. The addition of varying rates of sea level rise could worsen the many problems that coastal areas already face.[46]

Regulatory Background

Federal Climate Change Regulation

The federal government has been involved in climate change issues at least since 1978, when Congress passed the National Climate Program Act (92 Stat. 601), under authority of which the National Research Council prepared a report predicting that additional increases in atmospheric

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42 Ibid.

43 Intergovernmental Panel on Climate Change, "Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change," Cambridge, United Kingdom. 2007.

44 Intergovernmental Panel on Climate Change, "Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change," Cambridge, United Kingdom. 2007.

45 Ibid.

46 U.S. Environmental Protection Agency, "Coastal Areas Impacts & Adaptation," Climate Change Web Site, Internet URL: http://epa.gov/climatechange/impacts-adaptation/coasts.html. Updated June 14, 2012.

CO_2 would lead to non-negligible changes in climate. At the "Earth Summit" in 1992 in Rio de Janeiro, President George W. Bush signed the United Nations Framework Convention on Climate Change (UNFCCC), a nonbinding agreement among 154 nations to reduce atmospheric concentrations of carbon dioxide and other greenhouse gases. The treaty was ratified by the U.S. Senate. However, when the UNFCCC signatories met in 1997 in Kyoto, Japan, and adopted a protocol that assigned mandatory targets for industrialized nations to reduce greenhouse gas emissions, the U.S. Senate expressed its opposition to the treaty. The Kyoto Protocol was not submitted to the Senate for ratification.

In *Massachusetts et al. v. Environmental Protection Agency et al.* [549 U.S. 497 (2007)], the U.S. Supreme Court ruled that CO_2 was an air pollutant under the Clean Air Act, and that consequently, the U.S. Environmental Protection Agency (USEPA) had the authority to regulate its emissions. The Court also held that the Administrator must determine whether emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On April 24, 2009, the USEPA published its intention to find that (1) the current and projected concentrations of the mix of six key greenhouse gases—CO_2, CH_4, N_2O, HFCs, PFCs and SF_6—in the atmosphere threaten the public health and welfare of current and future generations, and that (2) the combined emissions of GHG from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key greenhouse gases and hence to the threat of climate change (74 Fed. Reg. 18886). These findings are required for subsequent regulations that would control GHG emissions from motor vehicles.

California Climate Change Regulation

Executive Order S-3-05 (GHG Emissions Reductions). Executive Order #S-3-05, signed by Governor Arnold Schwarzenegger on June 1, 2005, calls for a reduction in GHG emissions to 1990 levels by 2020 and for an 80% reduction in GHG emissions to below 1990 levels by 2050.

The California Global Warming Solutions Act of 2006 (AB 32). In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006 (Health and Safety Code § 38500 et seq.), into law. AB 32 was intended to effectively end the scientific debate in California over the existence and consequences of global warming. In general, AB 32 directs the California Air Resources Board (CARB) to do the following:

- On or before June 30, 2007, publicly make available a list of discrete early action GHG emission reduction measures that can be implemented prior to the adoption of the statewide GHG limit and the measures required to achieve compliance with the statewide limit;
- By January 1, 2008, determine the statewide levels of GHG emissions in 1990, and adopt a statewide GHG emissions limit that is equivalent to the 1990 level (an approximately 25% reduction in existing statewide GHG emissions);
- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures;
- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit

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by 2020, to become operative on January 1, 2012, at the latest. The emission reduction measures may include direct emission reduction measures, alternative compliance mechanisms, and potential monetary and non-monetary incentives that reduce GHG emissions from any sources or categories of sources as CARB finds necessary to achieve the statewide GHG emissions limit; and

- Monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.

On December 11, 2008, the CARB approved the *Climate Change Scoping Plan*[47] pursuant to AB 32. The Scoping Plan recommends a wide range of measures for reducing GHG emissions, including (but not limited to):

- Expanding and strengthening of existing energy efficiency programs;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a GHG emissions cap-and-trade program;
- Establishing targets for transportation-related GHG emissions for regions throughout the state, and pursuing policies and incentives to meet those targets;
- Implementing existing state laws and policies, including California's clean car standards, goods movement measures and the Low Carbon Fuel Standard; and
- Targeted fees to fund the state's long-term commitment to administering AB 32.

Executive Order S-01-07 (Low Carbon Fuel Standard). Executive Order #S-01-07 (January 18, 2007) establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020 through establishment of a Low Carbon Fuel Standard. Carbon intensity is the amount of CO_2e per unit of fuel energy emitted from each stage of producing, transporting and using the fuel in a motor vehicle. On April 23, 2009 the Air Resources Board adopted a regulation to implement the standard.

Senate Bill 97. Senate Bill 97 was signed by the governor on August 24, 2007. The bill required the Office of Planning and Research (OPR), by July 1, 2009, to prepare, develop and transmit to the resources agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by the California Environmental Quality Act (CEQA), including, but not limited to, effects associated with transportation or energy consumption. On April 13, 2009 OPR submitted to the Secretary for Natural Resources its proposed amendments to the State CEQA Guidelines for greenhouse gas emissions. The Resources Agency adopted those guidelines on December 30, 2009, and they became effective on March 18, 2010. The amendments treat GHG emissions as a separate category of impacts; i.e. they are not to be addressed as part of an analysis of air quality impacts.

Section 15064.4, which was added to the CEQA Guidelines, specifies how the significance of impacts from GHGs is to be determined. First, the lead agency should "make a good faith effort" to describe, calculate or estimate the amount of GHG emissions resulting from a project. After

[47] California Air Resources Board, *Climate Change Scoping Plan, a Framework for Change, Pursuant to AB32, the California Global Warming Solutions Act of 2006* (December 11, 2008).

that, the lead agency should consider the following factors when assessing the impacts of the GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions, relative to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional or local plan for the reduction or mitigation of GHG emissions.

The Governor's OPR asked the CARB to make recommendations for GHG-related thresholds of significance. On October 24, 2008, the CARB issued a preliminary draft staff proposal for *Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act.*[48] After holding two public workshops and receiving comments on the proposal, CARB staff decided not to proceed with threshold development.[49] Quantitative significance thresholds, if any, are to be set by local agencies.

Senate Bill 375. Senate Bill 375 requires coordination of land use and transportation planning to reduce GHG emissions from transportation sources. Regional transportation plans, which are developed by metropolitan transportation organizations such as the Southern California Association of Governments (SCAG), are to include "sustainable community strategies" to reduce GHG emissions.

Title 24. The Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, Part 6, of the *California Code of Regulations*) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Compliance with Title 24 will result in decreases in GHG emissions. The California Energy Commission adopted the 2008 changes to the Building Energy Efficiency Standards on April 23, 2008 with an aim to promote the objectives listed below.[50]

- Provide California with an adequate, reasonably-priced and environmentally-sound supply of energy.
- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its greenhouse gas emissions to 1990 levels by 2020.
- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.

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48 California Air Resources Board. *Preliminary Draft Staff Proposal. Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act.* Planning and Technical Support Division, Sacramento, California (October 24, 2008).

49 Personal communication from Douglas Ito, California Air Resources Board, Sacramento, California, to Michael Rogozen, UltraSystems Environmental Inc., Irvine, California. March 29, 2010.

50 "2008 Building Energy Efficiency Standards." California Energy Commission, Sacramento, California. (http://www.energy.ca.gov/title24/2008standards/index.html). These became effective January 1, 2010.

- Act on the findings of California's Integrated Energy Policy Report (IEPR) that Standards are the most cost effective means to achieve energy efficiency, expects the Building Energy Efficiency Standards to continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Standards in reducing energy related to meeting California's water needs and in reducing greenhouse gas emissions.
- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of state building codes.
- Meet the Executive Order in the Green Building Initiative to improve the energy efficiency of nonresidential buildings through aggressive standards.

The provisions of Title 24, Part 6 apply to all buildings for which an application for a building permit or renewal of an existing permit is required by law. They regulate design and construction of the building envelope, space-conditioning and water-heating systems, indoor and outdoor lighting systems of buildings, and signs located either indoors or outdoors. Title 24, Part 6 specifies mandatory, prescriptive and performance measures, all designed to optimize energy use in buildings and decrease overall consumption of energy to construct and operate residential and nonresidential buildings.[51] Mandatory measures establish requirements for manufacturing, construction and installation of certain systems; equipment and building components that are installed in buildings.

Impact Analysis

a) **Less Than Significant Impact.** The proposed project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Although the City of San Clemente has not adopted a quantitative threshold of significance for greenhouse gases, the City is within the South Coast Air Quality Management District's (SCAQMD) jurisdiction; therefore, the SCAQMD's Interim Thresholds[52] will be used for this analysis. In October, 2008, the SCAQMD issued its *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold.* The SCAQMD Board approved the document at its December 5, 2008 meeting.

The SCAQMD guidance proposes a tiered approach to establishing a significance threshold. It is designed to "capture" 90 percent of GHG emissions; that is, the threshold is low enough that it applies to the sources of 90 percent of the region's GHG emissions, and is high enough that it excludes most minor sources. The 90 percent approach of the SCAQMD thresholds is also consistent with AB32. The SCAQMD approach considers "direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation. Per the guidance, construction emissions will be amortized over the life of the project, defined as 30 years, added to the operational emissions, and compared to the applicable interim GHG significance threshold tier."

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51 *2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings*, California Energy Commission, (December 2008).

52 City of Orange, Community Development Department, "Interim Guidance for Greenhouse Gas Emissions Analysis," April 26, 2010.

As noted above, the SCAQMD's guidance uses a tiered approach rather than a single numerical emissions threshold. If a project's GHG emissions "fail" the non-significance of a given tier, then one goes to the next one. The tiers are summarized very briefly as follows.

Tier 1 – Applicable Exemptions. This tier no longer applies, so it is necessary to consider the next tier.

Tier 2 – Emissions Within Budgets of Regional Plans. GHG emissions are less than significant if the project is consistent with a local GHG reduction plan; however, the City of San Clemente and the County of Orange do not have an adopted local GHG reduction plan that meets all the following requirements classified in Tier 2: comply with AB32 GHG reduction goals; include emissions estimates agreed upon by either CARB or the Air Quality Management District (AQMD), have been analyzed under CEQA, have a certified Final CEQA document; include a GHG emissions inventory tracking mechanism; and include a process to monitor progress in achieving GHG emission reduction targets, and a commitment to remedy the excess emissions if GHG reduction goals are not met (enforcement). Thus, Tier 2 no longer applies, so it is necessary to consider the next tier.

Tier 3 - 90 Percent Capture Rate Emission Thresholds. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified projects would be subject to CEQA analysis. As stated in the thresholds document, the 90 percent emission capture rate is appropriate to address long-term adverse impacts associated with global climate change, and would capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth. For residential/commercial sectors, the Tier 3 numerical threshold is 3,000 metric tons CO_2e ($MTCO_2e$) per year.[53]

Tiers 4 and 5. These tiers are not relevant to the analysis, and so will not be discussed.

Construction Emissions

The proposed project would include site minimal preparation and clearing, minimal excavation, and construction of new HDPE pipe and rip rap. Each construction phase involves the use of a different mix of construction equipment and therefore, has its own distinct GHG emissions characteristics. A schedule of equipment use was set up to determine which equipment would be operated simultaneously. Construction-related emission estimates were based on the construction scenario of similar construction projects. Estimates of the types and numbers of pieces of equipment anticipated in each phase of construction and development were based on equipment requirements of similar construction projects. Pollutant emissions would vary from day to day depending on the intensity and type of construction activity.

[53] California Air Resources Board. *Preliminary Draft Staff Proposal. Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act.* Planning and Technical Support Division, Sacramento, California (October 24, 2008).

Project construction emissions were estimated using the construction module of the California Emissions Estimator Model (CalEEMod™). Construction of the proposed project was estimated to begin in early January 2013, and last for 30 days. The construction equipment GHG emissions were modeled using CalEEMod and CalEEMod's default values for horsepower and load factors, which are from the CARB's OFFROAD2007 model.

Operational Emissions

The proposed project is a HDPE pipe extension of to the existing catch basin at the end of the Avenida Columbo cul-de-sac. Because the proposed project will not generate additional traffic beyond the existing conditions, nor does it emit direct GHG emissions or consume electricity, the proposed project will have no operational GHG emissions.

A detailed breakdown of the results of the GHG emissions analysis can be found in **Table 4.7-1**, Annual GHG Emissions, 2013 through 2042.

Table 4.7-1 – Annual GHG Emissions, 2013 through 2042

Annual Emissions in 2013 (Metric Tons)				
Emission Source	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
Construction[a]	35.10	0.00	0.00	35.15
Totals	**0.492**	**0.00**	**0.00**	**0.493**
Note: Proposed project construction begins January 2013 and lasts 30 days. There will be no operational emissions associated with the proposed project. [a] Amortized over 30 years per SCAQMD Interim CEQA GHG Significance Threshold.				
Source: UltraSystems Environmental Inc. with CalEEMod (Version 2011.1).				

Greenhouse Gas Analysis

The annual GHG emissions in 2013 are 0.493 $MTCO_2e$. Compared to the annual SCAQMD threshold of 3,000 $MTCO_2e$, the proposed project will not exceed the threshold.

b) **Less Than Significant Impact.** The proposed project will not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Although the City of San Clemente does not yet have an adopted GHG inventory or an adopted Climate Action Plan, the CARB has developed a statewide GHG inventory to keep track of the AB32's 2020 target of reaching 1990 levels of CO_2. The latest report covers 2000 through 2009. In 2009, the total statewide GHG emissions were 457 million $MTCO_2e$ ($MMTCO_2e$). Including the influence of sinks such as CO_2 flux from forestry, the net emissions were 453 $MMTCO_2e$.[54] The total GHG emissions in 2009 represent a 5.5 percent increase from 1990 to 2009.

[54] California Air Resources Board, *California Greenhouse Gas Emissions Inventory: 2000-2009*, December 2011.

Since the proposed project generates annual GHG emissions of 0.493 $MTCO_2e$, which is less than the SCAQMD's Interim Thresholds of 3,000 $MTCO_2e$, the project would not conflict with AB32. Additionally, 0.493 $MTCO_2e$ represents 0.0000001% percent of the statewide GHG inventory. Therefore, the proposed project will have a less than significant impact.

Section 4.8 HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☐	☒	☐
(b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
(d) Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
(f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
(g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
(h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Impact Analysis

a) and b) **Less Than Significant Impact.** The proposed project is an extension of an existing storm drain, which will not include the routine transport, use, or disposal of hazardous materials. Common materials used during construction (solvents, fuel, etc.) would be used for a short period of time and would not create a significant hazard to the public or the environment as these materials would be properly stored when not in use and would be disposed of according to applicable requirements. Therefore a less than significant impact would occur, and no mitigation is required.

c) **No Impact.** There are no schools within one-quarter-mile of the project site, therefore no impacts would occur and no mitigation is required. The nearest school, Clarence Lobo Elementary School, is 0.4 mile away.

d) **No Impact.** A search of California's Department of Toxic Substances Control EnviroStar website did not identify any Federal Superfund Sites, State Response Sites, Voluntary Cleanup

Sites, School Cleanup Sites, Permitted Sites, or Corrective Action Sites on the project site. Therefore, no impacts would occur and no mitigation is required.

e) **No Impact.** The proposed project is not located within an Airport Land Use Plan. Therefore, no impact would result in a safety hazard for people residing or working in the project area.

f) **No Impact.** The proposed project is not located within the vicinity of a private airport, therefore no impact would result in a safety hazard for people residing or working in the project area.

g) **No Impact.** The proposed project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project is an extension of an existing storm drain which will not occur under any streets, therefore no impact will occur.

h) **No Impact.** The proposed project is not adjacent to wildlands and the residences in the vicinity of the project site are not intermixed with wildlands, therefore no impact.

Section 4.9 HYDROLOGY AND WATER QUALITY. *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
(b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.	☐	☐	☐	☒
(d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
(e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
(f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
(g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
(h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
(i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
(j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Impact Analysis

a) **Less Than Significant Impact.** Adoption of the proposed project would not violate water quality standards or waste discharge requirements. As part of a SWPPP, the use of Best Management Practices (BMPs) will be identified. Therefore, with compliance with existing regulations, project impact on water quality will be less than significant.

b) **No Impact.** No use of groundwater supplies is proposed and no adverse impacts to groundwater recharge will occur. The level of the local groundwater table will not be affected, and wells supporting existing or planned land uses will continue at the same level of production as without the proposed project. Therefore, no impact will occur to groundwater supplies or groundwater recharge resulting from this project.

c) **No Impact.** The proposed project will extend a storm drain and convey discharge down a hillside following the same pattern as before the project that outlets at the base of a slope. No courses of any stream or river will be affected. The outlet of the pipe will be constructed with an energy dissipater outlet structure and rip rap to prevent erosion.[55] Therefore, the construction activities and storm drain improvements associated with the proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

d) **No Impact.** No additional runoff will be taken from the tributary area to the proposed project. This is an improvement of the existing storm drain facility that will receive discharge from the same area and follow the same drainage pattern that outlets to the base of the slope. No impervious area is being added to the area contributing to the discharge carried by the proposed project. Project construction also will not cause flooding on- or off-site as construction would not generate nor require the introduction of large quantities of water. No courses of any stream or river will be affected. Therefore, the proposed project will have no impact on substantially altering the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increasing the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

e) **No Impact.** The proposed project will not create additional runoff. It will receive and channel discharge from catch basins that are in an existing neighborhood, and will improve the conveyance of runoff from the neighborhood to its outlet into the canyon. No polluted runoff will be generated as a result of this project. Therefore, the proposed project will not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

f) **Less Than Significant Impact.** The proposed project will not substantially degrade water quality. With adherence to the requirements of Regional Water Quality Control Board and the NPDES permit, the proposed project will not be a source of additional polluted runoff that would substantially degrade water quality. Therefore, no adverse impacts will occur to water quality.

g) **No Impact.** The proposed project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. The proposed project does not lie within a 100-year flood zone. The Flood Insurance Rate Map (FIRM) for Orange County (Map Number 06059C0536J) (see Figures 4.9-1 and 4.9-2, *Flood Insurance Rate Map*) indicates that the project site lies within Zone X, or "areas determined to be outside the 0.2% annual chance floodplain."[56] Therefore, there will be no impact relative to placing housing in a 100-year flood zone.

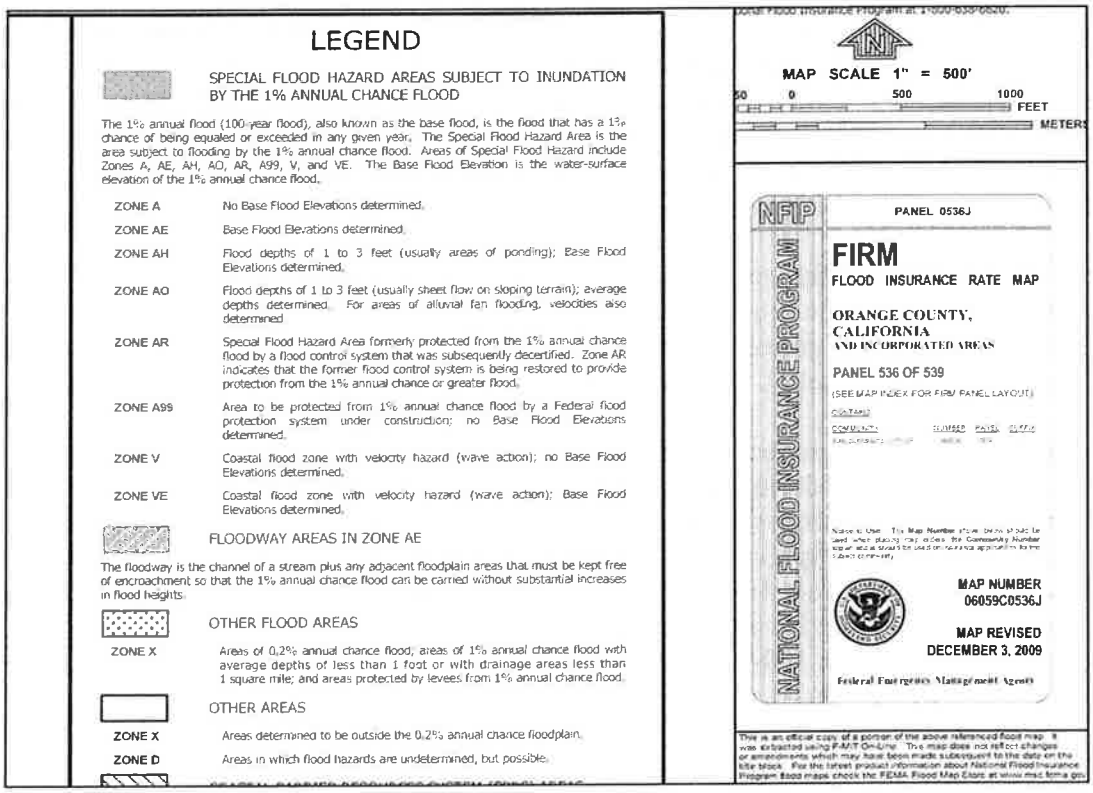
[55] City of San Clemente, Avenida Columbo Storm Drain Extension Project Hydrology and Hydraulics Preliminary Design Report, March 2011.
[56] https://msc.fema.gov/ Accessed September 26, 2012.

h) **No Impact.** The proposed project would not place within a 100-year flood hazard area structures which would impede or redirect flood flows because the project site and its vicinity are not located within the 100-year flood plain. No impact will occur.

i) **No Impact.** The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam because the project site is not located near a dam or in a flood zone, and no structures are located at the outlet of the project. Therefore, no impact will occur.

j) **No Impact.** The project site is not subject to seiche, tsunami or mudflow hazards. A seiche is an oscillation of a land-locked water body, such as a lake or dam. A tsunami is large ocean wave associated with a seismic event. The work associated with the existing project site is located approximately two miles from the Pacific Ocean, and is not located within a "Potential Tsunami Hazard area."[57] The proposed project involves extending a storm drain that collects discharge from catch basins in a neighborhood. Activities that are proposed to be conducted will not increase the likelihood or potential damage associated with inundation by seiche, tsunami, or mudflow.

Figure 4.9-1: Flood Insurance Rate Map Legend



[57] City of San Clemente General Plan. Accessed October 1, 2012.

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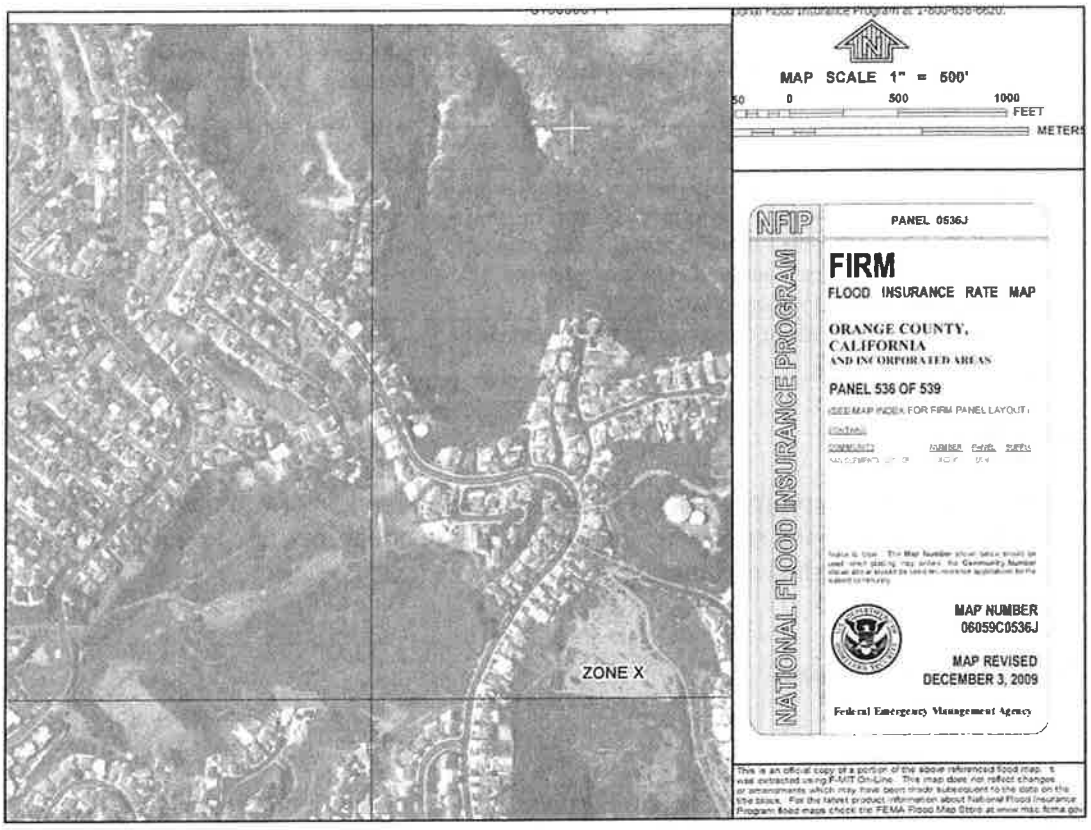
Figure 4.9-1: Flood Insurance Rate Map



Section 4.10 LAND USE/PLANNING. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Physically divide an established community?	☐	☐	☐	☒
(b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The proposed project is the extension of an existing storm drain. The new above ground pipe is located in an open space area and is not large enough in scale to have the potential to physically divide an established community.

b) **Less Than Significant Impact.**

Land Use

The western portion of the project site containing the existing underground pipe is designated RVL (Residential, Very Low) and the eastern portion of the project site which will contain the new above ground pipe is designated RM (Residential, Medium) by the City's General Plan Land Use Element. **Figure 4.10-2** shows the General Plan land use designations for the project site.

Typical principal uses within the RVL designation include single-family residential units. The maximum density/intensity and height is one unit per 20 gross acres or legal parcel of record, whichever is smaller.

Typical principal uses within the RM designation include single family residential, duplex townhomes, and apartments. The maximum density/intensity and height is 15 units per gross acre (24.0 units/net acre).

Table 4.10-1 depicts the General Plan policies that apply to the proposed project and how it will comply with them.

Table 4.10-1: General Plan Policies

Policy Number	Policy Text	How Proposed Project Will Comply
1.9.13	Require that development be sited and designed to protect significant environmental resources, including the provision of open space, in accordance with the Biological Resources Element policies.	The new pipe will be placed above ground in order to disturb the least amount of soil and biological resources.
1.9.15	Maintain open spaces to protect life and property from flooding, landslide, and other environmental hazards, where these cannot be mitigated, in accordance with the Utilities, Flooding, and Seismic Safety Elements.	The proposed storm drain extension will be constructed in compliance will all current building codes and City standards to protect against the risk of flooding and landslides.
1.28.1	Implement public infrastructure and service improvements necessary to support land uses accommodated by the Land Use Plan (as defined in the Circulation, Utilities, and Public Facilities and Services Elements of the General Plan).	The proposed storm drain extension has been identified by the City as a necessary infrastructure improvement to accommodate the surrounding neighborhood.

Zoning

The project site is zoned RL-1 (Residential, Low). **Figure 4.10-1** shows the zoning of the project site.

Table 17.32.030, Residential Zones Uses, from Title 17 of the City's Municipal Code lists the primary uses allowed to occur on a property which can be permitted or conditionally permitted.

The RL zone permits the development of low-density, single-family residential neighborhoods with single-family dwellings. A maximum density of seven (7) dwelling units per net acre is allowed in this zone.

City-initiated public utility projects in the RL zone are subject to the City's Public Works Department policy on the review of capital improvement projects.

The proposed project will comply with the City's General Plan and Municipal Code. It is not within a Specific Plan area or coastal zone subject to a local coastal program.

c) **No Impact.** The proposed project is not within a habitat conservation plan or natural community conservation plan area.

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Figure 4.10-1: Zoning Map

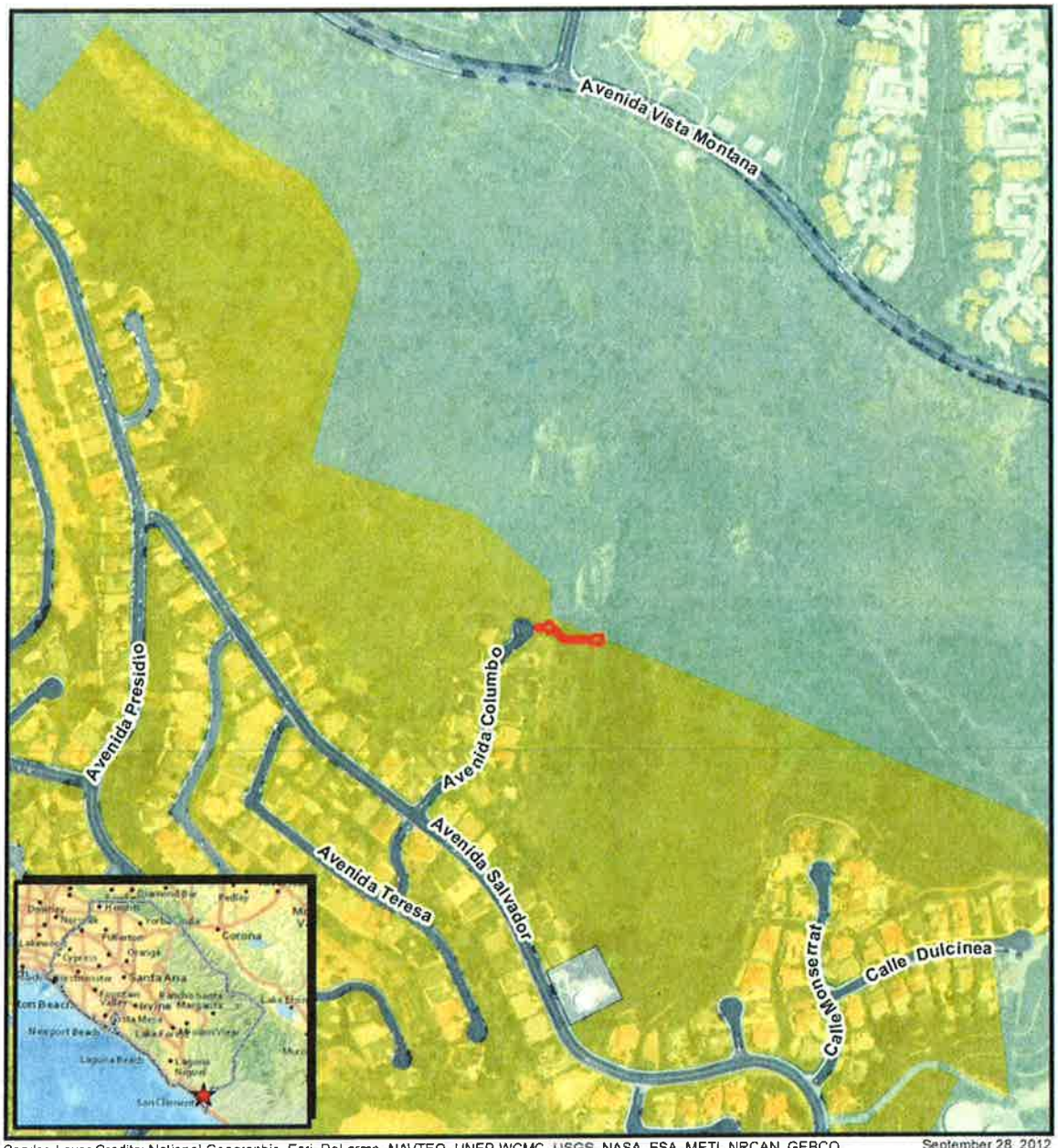

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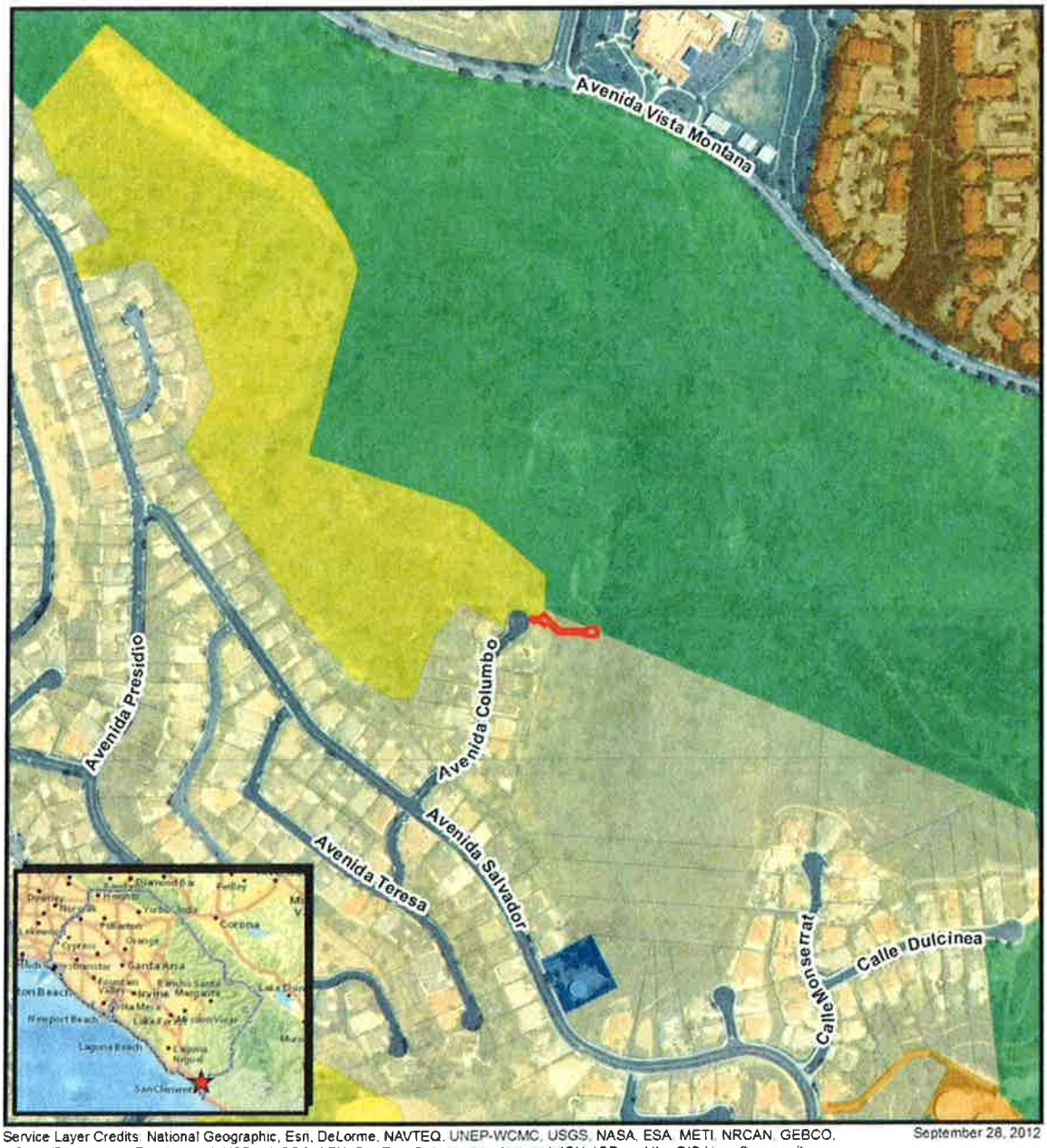
Figure 4.10-2: General Plan Land Use Map



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Section 4.11 MINERAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
(b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The proposed project would not result in the loss of a known mineral resource that would be of value to the region and residents of California. According to the City General Plan, there are no known significant mineral deposits in the City of San Clemente. Therefore, extension of the existing storm drain would not impact any known nonrenewable mineral resources of statewide or regional value.

b) **No Impact.** The proposed project would not result in the loss of availability of a locally-important mineral resource recovery site. As discussed above, there are no known significant mineral deposits in the City of San Clemente, as indicated in the City General Plan. Therefore, the proposed project would not result in significant impacts on locally-important resource recovery sites.

Section 4.12 NOISE. *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
(b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting," written as dBA.

Sound is recorded among several factors. One such factor is the "equivalent continuous noise level" (Leq), a measure of sound energy averaged over a period of time. It is referred to as the equivalent continuous noise level because it is equivalent to the level of a steady sound, which, over a referenced duration and location, has the same A-weighted sound energy as the fluctuating sound. Leq for periods of one-hour, during the daytime or nighttime hours, and 24 hours are commonly used in environmental assessments.

Another factor is the "Community Noise Equivalent Level" (CNEL). CNEL is a noise measurement system introduced by the State, with particular emphasis on airport noise. CNEL can be measured using ordinary dBA readings and it is the measure of the average noise environment over a 24-hour period, adjusted to an equivalent level to account for the lower tolerance of people to noise during evening and nighttime periods relative to the daytime period.

Residential development within the State is generally discouraged in the 60-65 CNEL noise impact area.

When evaluating environmental community noise levels, a 3-dBA increase over 24 hours is barely perceptible to most people; a 5-dBA increase is readily noticeable; and a 10-dBA increase is perceived as a doubling of loudness.

Impact Analysis

a) **Less than Significant Impact.** Noise impacts associated with this proposed project would only include short term impacts, as in the short term, construction activities, especially heavy equipment operation, will create noise effects on and adjacent to the construction site. No long term noise impacts will result from the proposed project since project-induced traffic is not likely. Therefore, permanent noise impacts from operation of the proposed project will not be in excess of applicable noise standards in the project area.

The primary regulatory documents that establish noise standards within the City of San Clemente are the San Clemente Municipal Code and the City's General Plan, Noise Element. According to the City's General Plan, Noise Element, in areas where existing or future noise levels exceed an Ldn of 60 dB (A) exterior and an Ldn of 45 DB (A) interior, all development of new housing, health care facilities, schools, libraries, religious facilities, and other "noise sensitive" land uses include appropriate buffering and or construction mitigation measures that will reduce exposure to levels within acceptable limits (*I 14.3, I 14.4 and I 14.5*).[58]

b) **No Impact.** The proposed project will not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Vibration is sound radiated through the ground. Groundborne noise is the rumbling sound caused by the vibration of building interior surfaces. The ground motion caused by vibration is measured as peak particle velocity (PPV) in inches per second and is referenced as vibration decibels (VdB). Typical outdoor sources of perceptible groundborne vibration are construction equipment and traffic on rough roads. The American National Standards Institute (ANSI) indicates that vibration levels in critical care areas, such as hospital surgical rooms and laboratories, should not exceed 0.2 inch per second of PPV.[59] The FTA also uses a PPV of 0.2 inch per second as vibration damage threshold for fragile buildings and a PPV of 0.12 inch per second for extremely fragile historic buildings.

The FTA criteria for infrequent ground-borne vibration events (less than 70 events per day) that may cause human annoyance are 83 VdB for institutional land uses and 80 VdB for residential land uses.[60] For the proposed project's construction, trucks hauling piping materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. The FTA has published standard vibration levels for construction equipment operations.[61] The calculated vibration levels expressed in VdB

[58] http://san-clemente.org/sc/Inf/Plans/General/Wd14.pdf. 27 September 2012.

[59] American National Standards Institute (**ANSI**). 1983. *"Guide to the Evaluation of Human Exposure to Vibration in Buildings"*, ANSI S.329-1983.

[60] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment.* Office of Planning and Environment, FTA-VA-90-1003-06 (May 2006).

and PPV for construction equipment at distance of 50 and 100 feet are listed in **Table 12-1,** *Vibration Levels of Construction Equipment (VdB) and Table 12-2, Vibration Levels of Construction Equipment (PPV).*

Table 4.12-1 Vibration Levels of Construction Equipment (VdB)

Equipment	Vibration Decibels at 50 ft. (VdB)	Vibration Decibels at 100 ft. (VdB)
Loaded Truck	77	68
Small Bulldozer	49	40

[a] Calculated vibration levels from sensitive receiver to loaded truck on Chamberlain Street.

Source: Federal Transit Administration. 2006. Noise and Vibration Impact Assessment. May. Chapter 12.

Table 4.12-2
Vibration Levels of Construction Equipment (PPV)

Equipment	PPV at 50 ft. (in/sec)	PPV at 100 ft. (in/sec)
Loaded Truck	0.0269	0.0095
Small Bulldozer	0.0011	0.0004

[a] Calculated vibration levels from sensitive receiver to loaded truck on Chamberlain Street.

Source: Federal Transit Administration. 2006. Noise and Vibration Impact Assessment. May. Chapter 12.

The sensitive receptor closest to the construction site is approximately 129 feet away. As shown in **Tables 12-1 and 12-2,** the vibration level of construction equipment at a distance of 100 feet, which is the approximate distance of a loaded truck and small bulldozer traveling on the nearest road, Avenida Columbo, is less than the FTA damage threshold of 0.12 inch per second PPV for fragile historic buildings and less than the damage threshold of 80 VdB for residential land uses. Therefore, there will be no impact from ground-borne noise or ground-borne vibration during project construction.

Operation (Long-Term Impacts)

Operation of the proposed project would not involve significant sources of groundborne vibration or ground-borne noise. Thus, operation of the proposed project will result in no long term impacts.

c) **No Impact.** The principal noise source in the project vicinity will be from short-term construction equipment and therefore, the proposed project will not result in substantial permanent increase in ambient noise levels. There will be no permanent sources of noise during operations and traffic on local roadways is not expected to be affected.

d) **Less than Significant Impact.** Construction of the proposed project would generate short-term intermittent increases in noise associated with construction activities. In the short term, construction of the proposed project may generate intermittent high noise levels on and adjacent to the site. However, construction noise levels would fluctuate, depending on the type and intensity of construction activity, equipment type and duration of use, and distance between the noise source(s) and the receiver.

Table 12-3, *Construction Equipment Noise Characteristics*, lists the types of equipment expected to be used. For each equipment type, the table shows the number of pieces of each equipment type expected to be used as well as an average noise emission level (in dB at 50 feet) and a "usage factor," which is an estimated percentage of operating time that the equipment would be producing noise at the stated level.[62]

Table 4.12-3 Construction Equipment Noise Characteristics

Equipment Type	*No. Pieces*	*Maximum Sound Level (dBA @ 50 feet)*	*Usage Factor (%)*
Crane		*81*	*16*
Forklift		*65*	*50*
Backhoe		*78*	*40*
Welder		*74*	*40*

Source: U.S. Department of Transportation, Research and Innovative Technology, FHWA Highway Construction Noise Handbook, *2006.*

The proposed project would include site minimal preparation and clearing, minimal grading and excavation, and construction of new HDPE pipe and rip rap. Each construction phase would involve the use of a different mix of construction equipment and, therefore, have its own distinct noise characteristics.

[62] Equipment noise emissions and usage factors are from Knauer, H. et al., 2006. *FHWA Highway Construction Noise Handbook.* U.S. Department of Transportation, Research and Innovative Technology, Administration, Cambridge, Massachusetts, FHWA-HEP-06-015 (August 2006), except where otherwise noted.

(e) **No Impact.** The proposed project is not located within an airport land use plan or within 2 miles of an airport. Therefore, the proposed project would not have the potential to expose people to excessive airborne noise levels associated with over-flights or aircraft departures or arrivals. Thus, the airborne noise impacts within the project area are anticipated to be less than significant.

f) **No Impact.** The proposed project is not located within the vicinity of a private airstrip. Therefore, implementation of the proposed project will not expose people residing or working in the project area to excessive noise levels. No further analysis of this issue is required.

Section 4.13 POPULATION AND HOUSING. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
(b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
(c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The proposed project would extend an existing storm drain line by 175 feet, and would occur completely underground. The project does not propose the development of new homes or businesses, and would not directly induce population growth in the area. The extension of the storm drain would also not indirectly induce population growth, as the proposed project is meant to serve existing population. Therefore, the project would result in no impact on the induction of substantial population growth, both directly and indirectly.

b) **No Impact.** The proposed project would extend an existing storm drain line by 175 feet in the northern direction, into open space, and would occur underground. This would not require the taking of residential homes. Therefore, the proposed project would result in no impact in the displacement of substantial numbers of existing housing, and would not necessitate the construction of replacement housing elsewhere.

c) **No Impact.** The proposed project would extend an existing storm drain line by 175 feet in the northern direction, into open space, and would occur underground. Construction and operation of the storm drain system would not displace substantial numbers of people. Therefore, the project would result in no impact in the displacement of substantial numbers of people, and would not necessitate the construction of replacement housing elsewhere.

Section 4.14 PUBLIC SERVICES. *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Would the project result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☐
i) Fire Protection?	☐	☐	☒	☐
ii) Police Protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Impact Analysis

(a)

i) **Less than Significant Impact.** The proposed project would result in a less than significant impact on fire protection services. The project site is located within a Very High Fire Hazard Severity Zone, as indicated by the California Department of Forestry and Fire Protection. This determination is based on factors such as fuel, slope and fire weather, and is the most severe fire hazard zone. The City of San Clemente is currently served by four fire stations. As mandated by the City of San Clemente Municipal Code, Chapter 15.48 (adopted in 1987) the primary objective of a five-minute maximum driving time for fire service throughout the community has been established. At buildout, the City of San Clemente needs a total of 4 Fire Stations.

The proposed project would extend an existing storm drain pipe by 175 feet, and would occur underground. The project would not result in an addition of residential homes or commercial floor area, and therefore, would not cause an increase in population, which otherwise may require a need for additional fire protection services. Therefore, the project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.

ii) **No Impact.** The proposed project would result in no impact on police protection services. The Orange County Sheriff's Department provides law enforcement services for the City of San Clemente. 44 sworn and 13 professional staff members operate from the San Clemente station located at 100 Ave. Presidio providing services that include patrol, investigations, traffic enforcement, community support, drug education, parking control, and crime prevention. The

proposed project would extend an existing storm drain pipe by 175 feet, and would occur underground. The project would not result in an addition of residential homes or commercial floor area, and therefore, would not cause an increase in population, which otherwise may require a need for additional police services. Therefore, the project would not result in substantial adverse physical impacts associated with the provision of or need for additional police services.

iii) **No Impact.** The proposed project would result in no impact on schools. The Capistrano Unified School District currently serves the City of San Clemente. The proposed project would extend an existing storm drain pipe by 175 feet, and would occur underground. The project would not result in an addition of residential homes or commercial floor area, and therefore, would not cause an increase in population, which otherwise may require a need for additional schools.

Therefore, the project would not result in substantial adverse physical impacts associated with the provision of or need for additional schools.

iv) **No Impact.** The proposed project would result in no impact on parks and recreational facilities. The nearest parks to the project site include Verde Park and Rancho San Clemente Park. The proposed project would extend an existing storm drain pipe by 175 feet, and would occur underground. The project would not result in an addition of residential homes or commercial floor area, and therefore, would not cause an increase in population, which otherwise may require a need for additional parks.

v) **No Impact.** The proposed project would result in no impact on other public facilities, such as libraries. Public facilities within the city include the San Clemente Library, which is located approximately 1.1 mile southwest of the project site. The proposed project would extend an existing storm drain pipe by 175 feet, and would occur underground. The project would not result in an addition of residential homes or commercial floor area, and therefore, would not cause an increase in population, which otherwise may require a need for additional facilities, such as libraries.

Section 4.15 RECREATION. *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The proposed project would extend an existing storm drain facility, which is currently located adjacent to a residential neighborhood and undeveloped open space. The extension of the storm drain facility is meant to support existing stormwater, and is not anticipated to result in the increased use of existing parks. Therefore, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities, and would not cause substantial physical deterioration of such facilities.

b) **No Impact.** The proposed project would result in no impact on recreational facilities, and would not require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. The proposed project would extend an existing storm drain facility, which is currently located adjacent to a residential neighborhood and undeveloped open space. The extension of the storm drain facility is meant to support existing stormwater, and is not anticipated to require the expansion of future recreational facilities. Therefore, the proposed project would not require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

Section 4.16 TRANSPORTATION/TRAFFIC. *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
(b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
(c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
(d) Substantially increase hazards due to a design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
(e) Result in inadequate emergency access?	☐	☐	☐	☒
(f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The proposed project (extension of an existing storm drain) will generate nominal construction traffic during construction. However, once constructed the project will not generate any traffic. Therefore the proposed project will not conflict with any applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system and no mitigation measures are required.

b) **No Impact.** There are no congestion management program facilities in the project vicinity per the 2009 Orange County Congestion Management Program. Therefore, the proposed project will not conflict with any applicable congestion management programs. Furthermore, the project will not generate any traffic once complete and no mitigation measures are required.

c) **No Impact.** There is no air traffic that travels near the project site. Therefore, the proposed project will not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks and no mitigation measures are required.

d) **No Impact.** No hazards will be increased due to the design feature of the storm drain extension. However, during construction, and as part of standard development procedures, the contractor will

be responsible for following Best Management Practices (BMPs) to ensure safe passage of vehicle and pedestrian traffic per the Work Area Traffic Control Handbook (or WATCH, published by the American Public Works Association 2012). Therefore, no impacts will result and no mitigation measures are required.

e) **No Impact.** The proposed project will not be constructed in the roadway or within an emergency access route. However, during construction, the contractor will be responsible for following Best Management Practices (BMPs) to ensure safe passage of vehicle and pedestrian traffic per the WATCH. The location of the proposed project is east of an existing single-family structure situated at the end of a cul-de-sac street (Avenida Columbo). Therefore the proposed project will not result in inadequate emergency access and no mitigation measures are required.

f) **No Impact.** The proposed project will not conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities therefore, no impacts will result and no mitigation measures are required.

Section 4.17 UTILITIES/SERVICE SYSTEMS. *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
(b) Require or result in the construction of new water or wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
(c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐
(d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
(e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
(f) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
(g) Comply with federal, state, and local statutes and regulations related to solid wastes.	☐	☐	☐	☒
(h) Require or result in the implementation of a new or retrofitted storm water treatment control Best Management Practice (BMP), (e.g. a water quality treatment basin, constructed treatment wetland, storage vault), the operation of which could result in significant environmental effects (e.g. increased vectors or odors)?	☐	☐	☐	☒

Impact Analysis

a) **No Impact.** The project would result in no impact on wastewater treatment requirements of the San Diego Region Water Quality Control Board (SDRWQCB). The proposed project would improve an existing storm drain pipe by 175 feet, which has been designed to capture storm water and urban run-off. It would not introduce facilities that would generate wastewater, and therefore, would not result in an increase of wastewater flows. Therefore, the project would not exceed wastewater treatment requirements for the SDRWQCB.

b) **No Impact.** The project would not require the construction of new water or wastewater treatment facilities, and therefore, therefore would result in no impact in the environment as a result of such facilities. The proposed project would improve an existing storm drain pipe by 175 feet, which has been designed to capture storm water and urban run-off. Since the project is a storm drain pipe extension, it does not require water facilities to complement the function of the storm drain pipe. In addition, it would not introduce facilities that would generate wastewater and therefore, would not result in an increase of wastewater flows. Therefore, the

proposed project will not require or result in the construction of new water or wastewater treatment or collection facilities, of which the construction could cause significant environmental effects.

c) **Less Than Significant Impacts With Mitigation Incorporated.** The proposed project would expand an existing storm drain pipe for 175 feet to capture storm water and urban run-off, and would result in less than significant impacts with mitigation incorporated in the environmental areas of biological resources, cultural resources, noise, and utilities/service systems as a result of such improvements. The evaluation and necessary mitigation measures for each environmental factor have been discussed under each topical section of this document. Please refer to Sections 4.4, 4.5, 4.12, and 4.17 for a detailed discussion on environmental factors that would result in less than significant impacts with mitigation incorporated.

d) **No Impact.** The proposed project would result in no impact on existing water supplies. It would improve an existing storm drain pipe by 175 feet, which has been designed to capture storm water and urban run-off. The project does not require water supplies for the function of the storm drain. Therefore, no new water supply entitlements are required to serve the proposed project.

e) **Less Than Significant Impact.** The proposed project will not create any additional demand upon the wastewater treatment provider. It has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. According to City engineers, the site of the Wastewater Treatment Plant (WWTP) will be able to accommodate approximately 400,000 to 500,000 gallons per day of treatment capacity expansion. Together with the recently expanded capacity, it is anticipated that this will be enough capacity to handle the projected General Plan buildout population utilizing the system.[63]

f) and g) **Less Than Significant Impact.** The proposed project will not create any long-term solid waste. Any solid waste generated during construction will be disposed of at the Prima Deshecha Landfill. The proposed project will comply with all federal, state, and local statutes and regulations related to solid wastes.

h) **No Impact.** The proposed project will not result in the implementation of a new or retrofitted storm water treatment control BMP. The proposed project is the extension of an existing storm drain and does not require BMPs.

[63] City of San Clemente General Plan, Utilities Element, May 2003, Page 6-2.

Section 4.18 MANDATORY FINDINGS OF SIGNIFICANCE. *Would the project:*	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
(b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects?)	☐	☐	☒	☐
(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Impact Analysis

a) **Less Than Significant Impact With Mitigation Incorporated.** Section 4.4 of this document discusses biological resources and any mitigation measures that are necessary to bring impacts to a less than significant level. A detailed Biological Assessment (BA) is also included as **Appendix A.** The BA includes a survey of the plant and animal species that are at or near the project site. Nine special-status species biological resources have a moderate to high potential to occur onsite. As a result of these findings, focused surveys, preconstruction surveys and construction monitoring are recommended for these species as best management practices (BMPs), implemented by the client during project construction. With the implementation of the mitigation measures and BMPs, potential impacts to species will be less than significant.

Section 4.5 of this document discusses cultural resources and any mitigation measures that are necessary to bring impacts to a less than significant level. The proposed project area has a moderate sensitivity for encountering archaeological resources during project construction. It is located in an area of overall high sensitivity for encountering archaeological resources, but is on a steep grade; this project area has a moderate archaeological sensitivity. Sites within one mile have been found to reach 130 centimeters below the ground surface. The plants that grow in and around the project area were among those that were and are used by the Native people of the area.

Prior to initiation of any construction activities, the lead agency or project management team should consult and retain a qualified archaeologist to monitor construction activities. Continuous construction monitoring along with avoidance of any indicated locations of prehistoric sites will reduce potential cultural resource impacts to a less than significant level. Since grubbing and excavation of the project area will disturb native soil, in terrain similar to areas that have been recorded as having archaeological resources (slopes and canyon bottoms), archaeological sites

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might still be uncovered during construction activities, in which case construction in that area must stop until the archaeologist assesses the resource and deems it safe for construction to continue. The archaeologist may recommend preservation of the site in place or may recommend data recovery. Native American monitoring services will also be required if sites or features are uncovered.

b) **Less Than Significant Impact.** The proposed project will not have cumulatively considerable impacts when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. There are no past projects, other current projects, or planned future projects within the vicinity of the project site that would lead to a cumulative impact.

c) **Less Than Significant Impact.** The proposed project will not cause any adverse effects on human beings. Section 4.3 discusses potential impacts to air quality. It was determined that the proposed project will not expose sensitive receptors to substantial pollutant concentrations. Localized impacts during construction and operation will be less than significant. Construction and operation of the proposed project will not increase local vehicle traffic and the localized CO concentrations will be less than significant.

Section 4.8 discusses potential impacts resulting from hazards and hazardous materials. The proposed project will not include the routine transport, use, or disposal of hazardous materials, and the project site is not included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5.

Section 4.12 discusses potential impacts resulting from noise generated by the proposed project. There will not be long-term noise impacts from the project since project-induced traffic is not likely. Permanent noise impacts from operation of the proposed project would not be in excess of applicable noise standards in the project area. Noise generated during construction will be less than the FTA damage threshold of 80 VdB for residential land uses. Operation of the proposed project will not involve significant sources of ground-borne vibration or ground-borne noise. Thus, operation of the proposed project will result in no impact.

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