MADISON AVENUE RESIDENTIAL PROJECT

DRAFT INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

PREPARED FOR:

City of El Cajon Community Development Department
200 Civic Center Way
El Cajon, CA 92020
Contact: Melissa Devine, AICP
(619) 441-1773

PREPARED BY:

ICF
525 B Street, Suite 1700
San Diego, CA 92101
Contact: Mary Bilse
(858) 444-3972

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Acronyms and Abbreviations

AB	Assembly Bill
ACM	asbestos-containing material
amsl	above mean sea level
APE	area of potential effect
APN	assessor's parcel number
ARB	California Air Resources Board
Basin Plan	water quality control plan
BMP	best management practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CBC	California Building Code
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
City	City of El Cajon
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COHP	California Office of Historic Preservation
CUP	conditional use permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
cy	cubic yard
Darnell	Darnell & Associates, Inc.
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency

FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
General Plan	City of El Cajon General Plan
GHG	greenhouse gas
GPS	global positioning system
GWP	global warming potential
H.O.A.	homeowners association
HU	hydrologic unit
I	Interstate
in/s	inches per second
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
LOS	level of service
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer system
MSCP	Multiple Species Conservation Program
MT	metric ton
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEHRP	National Earthquake Hazards Reduction Program
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
PM10	particulate matter less than 10 microns
PM2.5	particulate matter less than 2.5 microns
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	peak particle velocity
PRC	Public Resources Code
project	Madison Avenue Residential Project

RAQS	Regional Air Quality Strategy
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCIC	South Coast Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SMARA	Surface Mining and Reclamation Act of 1975
SMCC	Shadow Mountain Community Church
SO_X	sulfur oxide
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USC	United States Code
USGS	U.S. Geological Survey
v/c	volume to capacity

Chapter 1
Introduction and Overview

Overview

The City of El Cajon (City), as the lead agency under the California Environmental Quality Act (CEQA), has prepared this draft Initial Study (IS)/Mitigated Negative Declaration (MND) for the Madison Avenue Residential Project (project). The proposed project involves a 19-unit residential subdivision on two lots, Parcel 508-120-18 (north parcel) and Parcel 512-130-35 (south parcel). The project site is in the City of El Cajon, approximately 1.2 miles southeast of the Interstate (I) 8 and Greenfield Drive interchange.

Implementation of the proposed project would require approval of a General Plan Amendment, Zone Reclassification, removal from the Specific Plan Number 523, and Tentative Subdivision Map for 19 single-family residences by the City of El Cajon City Council. As part of the City's discretionary review process, the proposed project is required to undergo an environmental review in accordance with CEQA.

Purpose of a Negative Declaration

This IS/MND, which evaluates the environmental effects of the proposed project, has been prepared in compliance with CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the procedures for implementation of CEQA set forth in the State CEQA Guidelines (California Code of Regulations Title 14, Section 15000 et seq.). CEQA Section 21064 defines a "Negative Declaration" as a well-written statement that briefly describes the reasons that a proposed project would not have a significant and unavoidable impact on the environment and would not require preparation of an Environmental Impact Report (EIR).

Section 21604.5 defines a "Mitigated Negative Declaration" as a negative declaration prepared for a project when the IS has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the project proponent before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur and (2) there is no substantial evidence in light of the whole record before the lead agency that the project, as revised, may have a significant effect on the environment.

CEQA Section 21068 defines a significant effect on the environment as a substantial or potentially substantial adverse change in the environment. CEQA Section 21082.2(a) requires the lead agency to determine whether a project may have a significant effect on the environment, based on substantial evidence in light of the whole record.

The City has prepared an IS/MND to address the potential environmental effects associated with the project pursuant to the requirements of CEQA and the State CEQA Guidelines. The IS/MND includes a discussion of the project's effects on the existing environment. Issue areas identified as having potential impacts are discussed further and include mitigation measures that would reduce

potential impacts to "less than significant with mitigation incorporated." Project-specific information is discussed below.

Mitigation

Mitigation measures have been developed and incorporated into the proposed project design to reduce potentially significant impacts to less-than-significant levels. These measures are discussed in Chapter 3, *Environmental Checklist*, of this document. Further detail regarding each measure is provided in a separate document—*Mitigation Monitoring and Reporting Program for the Madison Avenue Residential Project*—that was prepared for the proposed project.

Initial Study Organization

The content and format of this report are designed to meet the requirements of CEQA. The IS/MND contains the following sections.

- Chapter 1, *Introduction and Overview*, identifies the purpose and scope of the Initial Study and describes the terminology used in the report.
- Chapter 2, *Project Description*, identities the location, provides background information, and describes the proposed project in detail.
- Chapter 3, *Environmental Checklist*, presents the CEQA checklist responses for each resource topic. This section includes a brief setting section for each resource topic and identifies the potential impacts of implementing the proposed project.
- Chapter 4, *References*, identifies all printed references and individuals cited in this IS/MND.
- Chapter 5, *List of Preparers*, identifies the individuals who prepared this report and their areas of technical specialty.

Chapter 2
Project Description

Project Overview and Background

The proposed project involves a 19-unit residential subdivision on two lots, one on the north parcel (2000 East Madison Avenue) and one on the south parcel (2075 East Madison Avenue). The project site is in the City of El Cajon, approximately 1.2 miles southeast of the I-8 and Greenfield Drive interchange.

Shadow Mountain Community Church's (SMCC's) first conditional use permit (CUP 96), approved in 1960, authorized the construction of a chapel, auditorium, cafeteria, dormitories, classroom buildings, library, swimming pool, shower and locker buildings, and off-street parking on the east campus. The next CUP (CUP 315), approved in 1969, authorized a student body of 200, with 80 students in on-site dormitories on the west campus. Two additional CUPs (CUP 1938 and CUP 1941) were approved in the fall of 2002 that authorized the installation of wireless communication facilities on the west campus. In 2004, CUP 1985 was approved, which authorized implementation of the SMCC 2022 Master Plan and EIR to direct the development of the three campuses over a 20-year period. An addendum to the SMCC EIR was approved in 2013 for Specific Plan No. 523, which consolidated the master plan for the campuses into one governing specific plan.

Project Location and Environmental Setting

The project site is in the eastern portion of the City, approximately 1 mile southeast of the I-8 and Greenfield Drive interchange. Regional access to the site is provided by I-8 and Greenfield Drive. Local access is provided by East Madison Avenue and Granite Hills Drive. Figure 2-1 shows the regional location of the proposed project, and Figure 2-2 shows the project vicinity. The project site is situated in the unsectioned Rancho Lands of El Cajon, Township 16 South, Range 1 East of the San Bernardino Meridian. The north parcel contains 3.43 acres and the south parcel contains 4.66 acres (total project site is 8.24 acres). Madison Avenue divides the north and south parcels. A prominent knoll is located on the south parcel and the topography of the north parcel is relatively flat with no notable landmarks. Existing uses on the north parcel consist of a single-family residence and a vacant/graded lot. The existing residence and improvements on Lot 11 are to remain in their present state. The existing City of El Cajon General Plan (General Plan) land use designation is Parochial School; the existing zoning is RS-20. Existing uses on the south parcel consist of a vacant/graded lot. The General Plan land use designation is Low-Low Density Residential, and the existing zoning is RS-20 H.

The area surrounding the project site is occupied predominantly by single-family residences. Most of the residential area north of East Madison Avenue is within an unincorporated area of San Diego County. The residences to the south and west are within the City of El Cajon. Other land uses in the area include Saint Madeline's Sophie's Center, on East Madison Avenue immediately east of the SMCC facility, and Granite Hills High School, Montgomery Middle School, East Madison Elementary School, and John F. Kennedy Park, located west of the project site between East Madison Avenue and Granite Hills Drive. The areas to the east and south are at high elevations and overlook the project site.

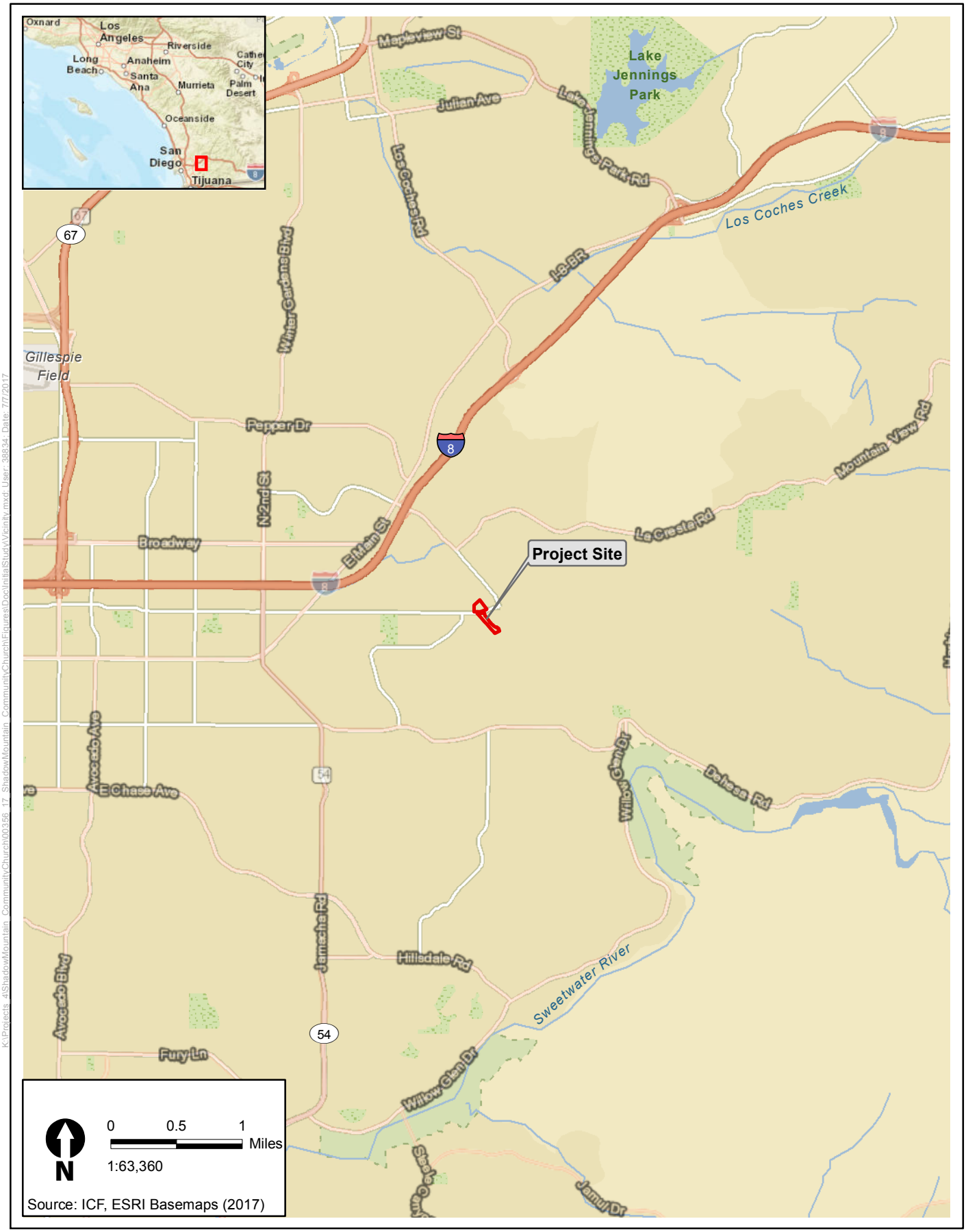

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Figure 2-1
Regional Vicinity
Madison Avenue Residential Project

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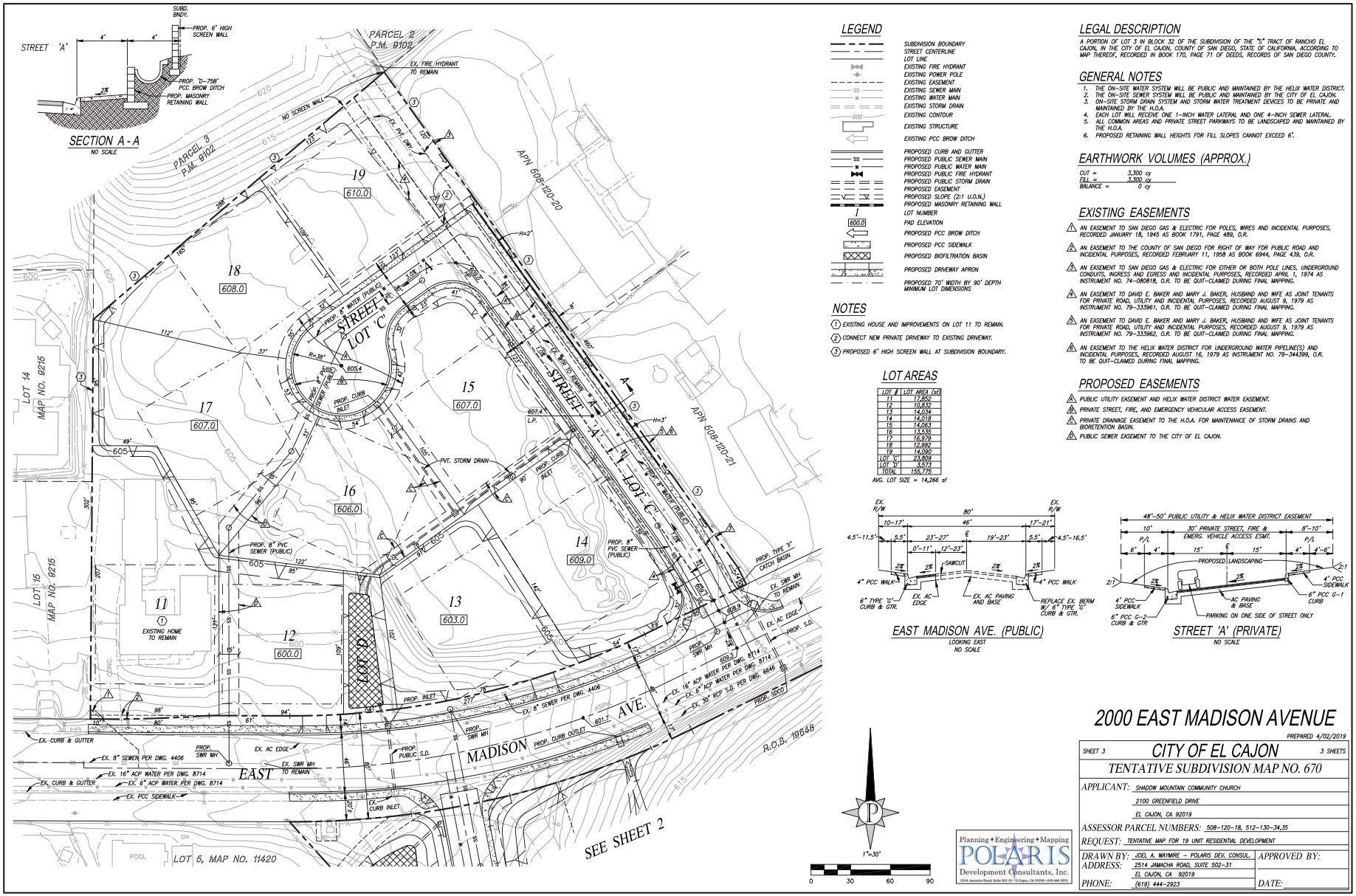
Figure 2-2
Project Location
Madison Avenue Residential Project



Source: Polaris, 2018.

Figure 2-3
Site Plan for 2000 East Madison Avenue
Shadow Mountain Community Church

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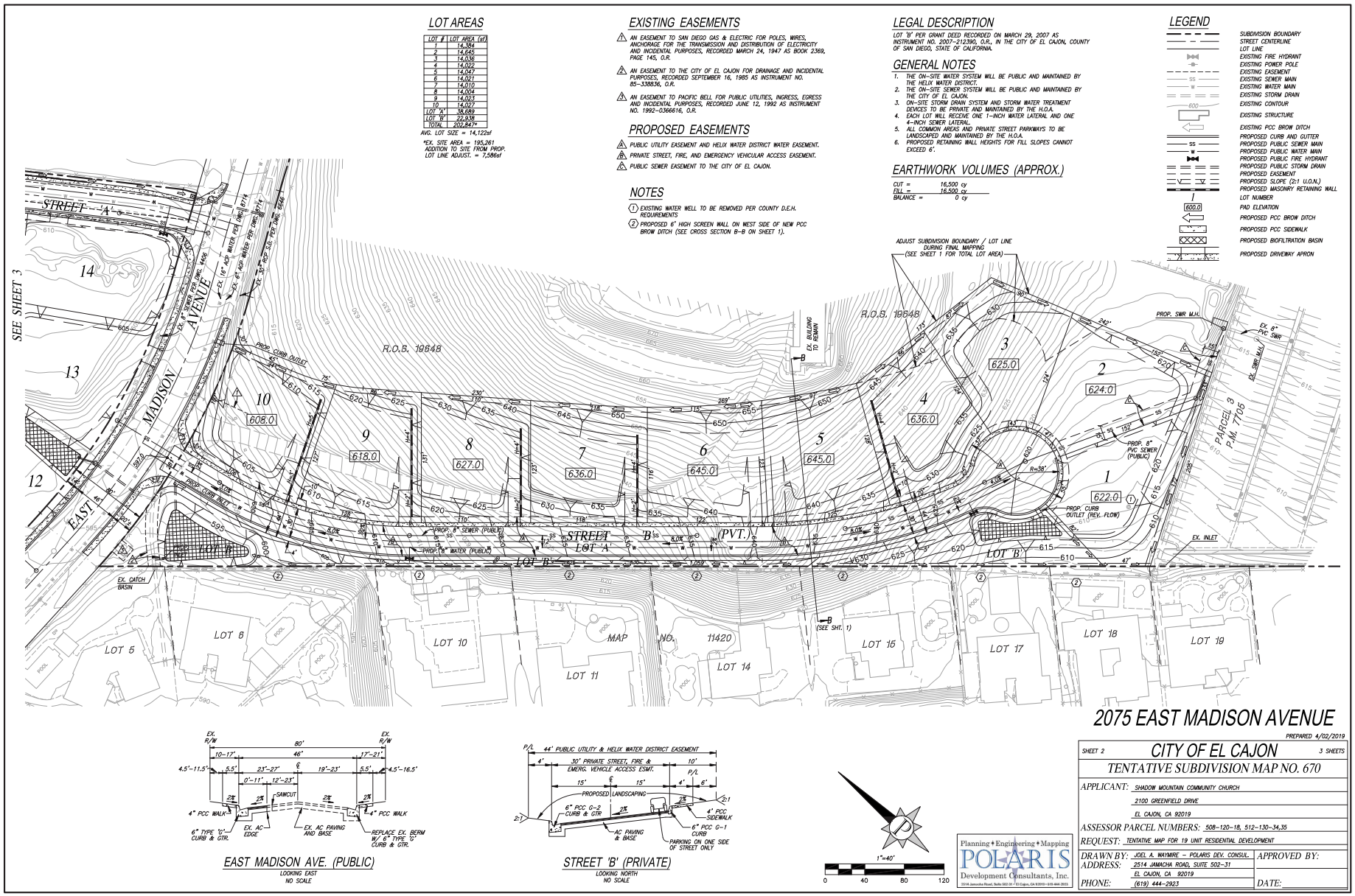

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Source: Polaris, 2018.

Figure 2-4
Site Plan for 2075 East Madison Avenue
Shadow Mountain Community Church

Project Description

The proposed project consists of a residential subdivision consisting of two non-contiguous properties: the north parcel, located on a 3.58-acre lot at 2000 East Madison Avenue, and the south parcel, located on a 4.66-acre lot at 2075 East Madison Avenue (see Figures 2-3 and 2-4). The southern parcel includes a lot line adjustment (LLA) that will move 7,586 square feet from Lot A (Seminary property) to Lot B (residential subdivision).

The north parcel would be subdivided into 9 single-family residential lots, ranging in size from 10,832 to 17,852 square feet. The proposed project includes a General Plan amendment to redesignate the subject site to Low-Low Density Residential, and a proposed Zone Reclassification to the RS-14 zone. All of the proposed lots would be rectangular or irregular in shape and front on a public or private street, consistent with requirements identified in Municipal Code Title 16.16, Major Subdivisions. The existing residence located in the southwest corner of the north parcel would remain in place and would occupy Lot 11. Proposed Lots 12 and 13 would front onto Madison Avenue. A new private street would provide access to Lots 14 through 19 and would connect to the existing private driveway that provides access to properties north of the project site. The proposed private street would extend north from Madison Avenue and then turn to the west where it would end in a cul-de-sac. The properties to the north of the proposed project will continue to have street access through the existing private driveway. The street improvements include a sidewalk and curb and gutters. A six foot high masonry screen wall is proposed along the west, north, and east perimeter of the subdivision boundary.

The proposed project would result in approximately 3,300 cubic yards (cy) of cut and 3,300 cy of fill on the north parcel; therefore, import or export of soil would not be necessary. Located north of Madison Avenue would be a private drainage easement to the homeowners association (H.O.A.) for maintenance of storm drains and a bioretention basin. The proposed project would include removing the existing 8-inch sewer line adjacent to the southern boundary of the north parcel, within the Madison Avenue right-of-way and installing a new 8-inch public sewer along Madison Avenue and the proposed street. Existing water lines would remain in place. New curb, gutter, and sidewalk would be installed along the frontage of both properties in the Madison Avenue right-of-way.

The south parcel would be subdivided into 10 single-family residential lots, ranging in size from 14,004 to 14,645 square feet. The General Plan land use designation will remain the same, Low Density Residential, and the proposed zoning reclassification is RS-14 Hillside Overlay. All of the proposed lots would be rectangular or irregular in shape and front on a private street, consistent with requirements identified in Municipal Code Title 16.16, Major Subdivisions. The south parcel would include retaining walls on Lots 4, and 7 - 10 that range in height from 2 feet to 5 feet. Construction of the proposed project would require cut of approximately 16,500 cy of soil and fill of approximately 16,500 cy of soil; therefore, import or export of soil would not be necessary. A proposed private street would extend south from Madison Avenue through the parcel, and a new 8-inch sewer line and 8-inch water line would connect to the existing lines and run south along the proposed street. The private street proposes easements to fire and emergency vehicles, public utility easements, Helix Water easement, and a public sewer easement to the City. The street would include a sidewalk on the east side of the street and curb along both sides of the street and gutter on the west side of the street. Two biofiltration basins are proposed for the south parcel; one would be located in the northwest corner of the parcel, and the other would be located in the southwest

corner. They would each require a private drainage easement to the H.O.A. for maintenance of the storm drains and biofiltration basins. Prestressed Concrete Cylinder (PCC) brow ditches are located on the east and west perimeter of the parcels and will drain towards respective catch basins and bioretention basins. A six foot high masonry screen wall will be located on the west perimeter of the subdivision on the west side of the new PCC brow ditch. In addition, an existing water well would be removed from the southwestern portion of the parcel in accordance with the County of San Diego Department of Environmental Health requirements.

On-site water and sewer systems would be public and maintained by Helix Water District and the City of El Cajon, respectively. On-site storm drain systems and stormwater treatment devices would be private and maintained by the H.O.A. Each lot would receive one 1-inch water lateral and one 4-inch sewer lateral.

Construction Activities

The proposed project is to subdivide two noncontiguous parcels into 19 single-family residential lots. No construction would occur at this time; however, it is reasonably foreseeable that the residential dwelling units would be constructed at a later date. It is anticipated that construction would occur over a 1-year period. Construction activities would occur between the hours of 7 a.m. and 7 p.m. (Monday through Friday), in accordance with the City of El Cajon Noise Ordinance. Construction activities would use typical construction equipment, such as excavators, backhoes, and bulldozers. Activities would also involve a small number of vendor trips (i.e., material deliveries). No unusual heavy machinery for low-rise residential construction, such as pile drivers or cranes, would be used.

Required Discretionary Approvals

The City of El Cajon is the lead agency under CEQA and responsible for permitting the project. The following discretionary approvals would be required to implement the project as proposed:

- Adopt an MND, Mitigation Monitoring and Reporting Program, and Mandatory Findings of Significance;
- Approve a General Plan Amendment;
- Approve a Zone Reclassification;
- Approve a Tentative Subdivision Map; and
- Approve an amendment to Specific Plan No. 523.

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Chapter 3
Initial Study/Environmental Checklist

1.	**Project Title:**	Madison Avenue Residential Project
2.	**Lead Agency Name and Address:**	City of El Cajon 200 Civic Center Way El Cajon, CA 92020
3.	**Contact Person and Phone Number:**	Melissa Devine, AICP (619) 441-1773
4.	**Project Location:**	2000 and 2075 East Madison Avenue, El Cajon, CA 92019. Figures 2-1 and 2-2 show the regional location of the proposed project and the project vicinity, respectively.
5.	**Project Sponsor's Name and Address:**	Bryan Snow, Executive Pastor Shadow Mountain Community Church 2100 Greenfield Drive El Cajon, CA 92019
6.	**General Plan Designation:**	The existing designation on the north parcel is Parochial School; the proposed designation is Low-Low Density Residential. The existing designation on the south parcel is Low-Low Density Residential which is not proposed to change.
7.	**Zoning:**	The existing zoning on the both the north and south project sites is RS-20; the proposed zoning is RS-14.

8. Description of Project:

The residential subdivision on the north parcel would subdivide the 3.58-acre parcel into 9 single-family residential lots. The residential subdivision on the south parcel would subdivide the 4.66-acre parcel into 10 single-family residential lots. The southern parcel includes a lot line adjustment (LLA) that will move 7,586 square feet from Lot A (Seminary property) to Lot B (residential subdivision).

9. Surrounding Land Uses and Setting:

North: Single-family residential
East: Shadow Mountain Community Church facilities
South: Single-family residential
West: Single-family residential

10. Other Public Agencies Whose Approval Is Required:

City: Adoption of MND; approval of Tentative Subdivision Map, General Plan Amendment, and Zone Reclassification; and amendment to Specific Plan No. 523.

Environmental Factors Potentially Affected

The environmental factors checked below could be affected by this project (i.e., the project would involve at least one impact that is a "potentially significant impact"), as indicated by the checklists on the following pages.

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

Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ 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 to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

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

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

Signature	7.3.2019 Date
Melissa Devine, AICP Printed Name	City of El Cajon For

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 such as the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, 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 when the incorporation of mitigation measures has reduced an effect from a "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.
5. Earlier analyses may be used if, pursuant to tiering, a program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or Negative Declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where earlier analyses are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the 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 Incorporated," describe the mitigation measures that 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, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

I. Aesthetics	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Except as provided in Public Resources Code Section 21009, would the project:				
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 along a State scenic highway?	☐	☐	☐	☒
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public view are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

Environmental Setting

The project site is in the eastern portion of the City of El Cajon, approximately 1 mile southeast of the I-8 and Greenfield Drive interchange. Regional access to the site is provided by I-8 and Greenfield Drive. Local access is provided by East Madison Avenue and Granite Hills Drive.

The north parcel of the proposed project site encompasses 3.34 acres and is relatively flat. The north parcel is currently developed with a residence and related improvements, a private driveway, and vacant/disturbed lot. The south parcel encompasses 4.66 acres and has a prominent knoll on the eastern side of the parcel. The south parcel consists of a private driveway, landscaping, and vacant/graded land. The area surrounding the project site is occupied predominantly by single-family residences. Most of the residential area north of East Madison Avenue is within an unincorporated area of San Diego County. The residences to the east, south, and west are within the City of El Cajon. Other land uses in the area include Saint Madeline's Sophie's Center, located on East Madison Avenue to the east of the SMCC facility, and Granite Hills High School, Montgomery Middle School, East Madison Elementary School, and John F. Kennedy Park, located west of the project site between East Madison Avenue and Granite Hills Drive. The areas to the east and south are at high elevations and overlook the project site.

Regulatory Setting

California Scenic Highway Program

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program, which was created in 1963 by the California legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are eligible for designation as scenic highways or have been designated as such. A highway's designation as "scenic" may be based on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263.

El Cajon General Plan

The City of El Cajon General Plan contains objectives and policies related to development that could be applicable to the proposed project.

Objective 8-2: Ensure that the physical environment of the El Cajon area is protected from adverse impact.

> **Policy 8-2.1:** The retention of the unique natural features of a development site such as rock outcroppings, native vegetation and trees shall be encouraged.
>
> **Policy 8-2.1:** The flat, valley portions of El Cajon shall receive the most intensive development. Hillside areas shall receive less intensive development. Steep hillside areas (slope more than 25%) shall be placed in the open space land use category.
>
> **Policy 8-2.3:** All graded slopes shall be adequately planted for erosion control.
>
> **Policy 8-2.4:** Special design standards shall be considered for local residential service roads in hillside areas.

Objective 8-5: Achieve an urban form which respects the natural land forms of the area and preserves the unique contrast between the valley's level floor and the surrounding hills.

> **Policy 8-5.1:** Planned Residential Developments shall be recommended for proposed projects on hillside property.
>
> **Policy 8-5.2:** Excessive amounts of grading with enormous and unsightly banks shall be controlled by application of the Hillside Overlay zone to hillside property.
>
> **Policy 8-5.3:** Hillside property retained in its natural state and used for passive public recreational purposes (hiking, picnicking, etc.) shall be considered for public acquisition.

City of El Cajon Municipal Code

Sections 142.0740 (Glare) and 142.0730 (Outdoor Lighting)

City of El Cajon Municipal Code Section 17.130.150: On-Site Lighting. All development, except detached single-family residences, shall provide adequate lighting for pedestrian and vehicular safety and be sufficient to minimize security problems. However, in no case shall lighting on one

property create a nuisance on any other property. An on-site lighting plan for all parking areas, pedestrian walkways, and common open space/recreation areas shall be required prior to the issuance of building permits for all projects, except single-family residences, unless the single-family residences are part of a planned unit development or a planned residential development (Ord. 4950, Section 3, 2010).

Chapter 17.170 H (Hillside Overlay) Zone

Section 17.170.010 Intent and Purpose: It is the purpose of the hillside overlay zone to provide for the reasonable use of hillside areas while achieving the following:

A. Minimizing the danger imposed on the public health, safety and welfare by soil erosion, slippage, flooding and fire; and

B. Minimizing the disturbance of the natural terrain and thereby conserving the aesthetic qualities afforded by these areas.

With the recognition that hillsides do not lend themselves to the same development standards as predominantly level lands, the regulations and restrictions contained in this chapter are intended to encourage the orderly and controlled development of the hillside areas in El Cajon. (Ord. 4950 § 3, 2010).

Section 17.170.020 Permitted uses. The uses permitted by the underlying zone are subject to the restrictions and regulations of the underlying zone in addition to the restrictions and regulations of this zone. (Ord. 4950 § 3, 2010).

Section 17.170.030 Lot Lines. Where applicable, lot lines shall be at the top of slopes so that all downhill slopes are made part of the lot at the lower elevation. (Ord. 4950 § 3, 2010).

Section 17.170.040 Development Standards – Grading. Grading regulations shall be as follows:

A. Cut and fill slopes shall be constructed at a gradient ratio no steeper than two horizontal to one vertical (2:1).

B. No cut or fill slope or combination thereof shall exceed the height of 30 feet measured vertically.

C. Cut and fill slopes with a height greater than 15 feet shall be separated by a building pad, a street, or, if a natural slope separation is used, a minimum distance of 30 feet.

D. The elevation of the natural terrain shall not be lowered or raised by more than 30 feet.

E. The density of all fill material shall be compacted to no less than 90 percent of maximum density, unless the city engineer requires a more dense compaction.

F. The tops and vertical corners of all constructed slopes shall be rounded to eliminate the sharp corners and shall have a minimum curvature radius of at least five (5) feet.

G. All slopes created as a result of grading shall have adequate provision for conducting water drainage from the site to a natural drainage course, drainage channel or public right-of-way. (Ord. 4950 § 3, 2010).

Impact Analysis

Would the project:

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

Less-than-Significant Impact. The City has no designated scenic vistas or scenic resources on or near the site. Both the north parcel and the south parcel have been previously graded and do not contain unique geologic features or historic buildings with scenic values. The topography of the north parcel is generally flat and consists of a single-family residence and a vacant/graded lot. The topography of the south parcel is sloped with a knoll on the eastern portion of the parcel and it consists of a vacant/graded lot. The southern parcel is located within the hillside overlay zone where minimal disturbance of the natural terrain is encouraged. The proposed project has been designed to minimize the use of retaining walls, and proposed retaining walls are no more than 5 feet high. This will help protect the scenic and aesthetic value of the existing knoll as well as minimize the disturbance of the natural terrain. The proposed residential subdivision is compatible with the existing visual environment in terms of visual character and quality because residences and schools/educational facilities currently surround the site. The proposed residential uses would be consistent with the surrounding views and would not block the view of the knoll from Madison Avenue. Therefore, the proposed project would have a less-than-significant impact on scenic vistas.

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

No Impact. The site is adjacent to Madison Avenue and west of Greenfield Drive. These roadways are not designated scenic highways, and the City's General Plan does not identify them as scenic (City of El Cajon 2000). There are no designated scenic highways in the vicinity of the site, and no impacts would occur. The nearest scenic highway is State Route (SR) 125, a state-designated scenic highway located more than 6 miles west and south of the project area (Caltrans 2017). SR-125, from SR-94 to I-8, a distance of 2 miles, is an urban highway that crosses rolling topography with medium-density hillside residences. The project site is not visible from SR-125. Finally, no rock outcroppings or historic buildings would be affected by the project. Therefore, no impact on scenic resources such as trees or views along scenic highways would occur during project construction or operation. Because there are no significant scenic resources on-site or state scenic highways in the vicinity, the proposed project would have no impact on scenic resources within a state scenic highway.

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less-than-Significant Impact. During construction, equipment and construction-related vehicles would be present and visible to nearby residents. However, the presence of construction equipment would be temporary and would not be visually obtrusive or highly adverse. Construction equipment would be moved around the site and removed once it is no longer needed. Therefore, construction of the project would not degrade the existing visual character or quality of the project site and its surroundings. Impacts would be less than significant.

The southern parcel is located within the hillside overlay zone where minimal disturbance of the natural terrain is encouraged. This includes reducing the areas of grading to protect the natural features of the site. The proposed project has been designed to minimize the height of the retaining walls to between 2 and 5 feet high. This will help protect the scenic and aesthetic value of the existing knoll as well as minimize the disturbance of the natural terrain. Once constructed, the site would have a visual character that would be similar to its surroundings, which include residential land uses. The proposed project would be compatible with the existing environment's visual character and quality because the residential subdivision would not dominate the viewshed or strongly influence the pattern of the surrounding environment. Therefore, the proposed project would not significantly degrade the existing visual character or quality of the site or its surroundings. The proposed project would not conflict with the zoning governing the scenic quality of the area.

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

Less-than-Significant Impact. The project site and surrounding area are developed with several sources of light and glare. The additional lighting proposed by the project would be limited to typical lighting associated with single-family residential uses. It would be consistent with the City's lighting standards and would not create a substantially new source of light or glare. Therefore, the project's operational impacts related to glare and lighting would be less than significant.

II. Agricultural and Forestry Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
In determining whether impacts on 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 Depart. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on 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 the Forest Legacy Assessment Project and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
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 nonagricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental Setting

The General Plan land use designation on the north parcel is Parochial School; the proposed designation is Low-Low Density Residential. The General Plan land use designation on the south

parcel is Low-Low Density Residential which is not proposed to change. Existing zoning for both sites is RS-20 and the southern parcel lies within the hillside overlay zone; the proposed zoning is RS-14. The surrounding area is characterized by uses that do not include or support agricultural or forestry uses. No designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is on site or nearby (California Department of Conservation 2015).

Regulatory Setting

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program identifies and designates areas with prime soils and soils of local or statewide importance based on their suitability for agricultural use. According to the San Diego Important Farmland Map, the project site is entirely classified as Urban and Built-Up Land (California Department of Conservation 2015).

Williamson Act

The California Land Conservation Act of 1965—commonly referred to as the Williamson Act—enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses. In return, landowners receive property tax assessments that are much lower than normal because the assessments are based on farming and open space uses as opposed to full market value. According to the California Department of Conservation's San Diego County Williamson Act Lands Map, all land in the City of El Cajon, including the project site, is designated Urban and Built-up Land. No Williamson Act lands occur on the site (California Department of Conservation 2013).

Impact Analysis

Would the project:

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 nonagricultural use?

No Impact. The project site does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. As such, there is no potential for construction or operation of the project to convert Farmland resources to a non-agricultural use. No impact related to the project's construction or operation would occur.

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

No Impact. The project site is not zoned for agricultural use, nor is there a Williamson Act contract for the site. Therefore, construction and operation of the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract. No impact related to the project's construction or operation would occur.

c. Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code

Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. No land that has been zoned as forest land or timberland exists within the boundaries of the project site. Therefore, construction and operation of the proposed project would not conflict with existing zoning for forest land or timberland. No impact related to the project's construction or operation would occur.

d. Result in the loss of forestland or conversion of forestland to non-forest use?

No Impact. As discussed in Item IIc, no land that has been zoned as forest land or timberland exists on the project site. Construction and operation of the proposed project would not result in a loss of forest land or the conversion of forest land to other uses. No impact related to the project's construction or operation would occur.

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

No Impact. See Item IIa. No agricultural land, forestland, or timberland exists in the project site vicinity. Construction and operation of the proposed project would not involve changes to the existing environment that, because of their location or nature, could result in the conversion of Farmland to nonagricultural use or forestland to non-forest use. No impact related to the project's construction or operation would occur.

III. Air Quality	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
When available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

Environmental Setting

The project site is within the San Diego Air Basin (SDAB), which is contiguous with San Diego County. The San Diego Air Pollution Control District (SDAPCD) is the regional government agency that monitors and regulates air pollution within the SDAB. It is also responsible for monitoring air quality for the region. The SDAPCD is required, pursuant to the federal or state Clean Air Act (CAA), to reduce emissions of the criteria pollutants for which the SDAB is in nonattainment status. The SDAB is currently classified as a moderate nonattainment area for the federal 8-hour ozone (O_3) standard and a partial moderate maintenance area for the federal carbon monoxide (CO) standard. In addition, the SDAB is classified as a nonattainment area for state O_3, particulate matter less than 2.5 microns (PM2.5), and less than 10 microns (PM10) standards (U.S. Environmental Protection Agency 2017; California Air Resources Board 2016).

All areas that have been designated as nonattainment areas are required to prepare plans that show how they would meet the state and federal air quality standards by the attainment dates. The San Diego Regional Air Quality Strategy (RAQS) is the applicable air quality plan for improving air quality in the region and attaining federal and state air quality standards. The RAQS relies on information from the California Air Resources Board (ARB) and the San Diego Association of Governments (SANDAG), including projected growth in the county, which is based in part on local general plans. Generally, projects that propose development that would be consistent with the land use designations and growth anticipated by the local general plan and SANDAG would be consistent with the RAQS.

Regulatory Setting

Federal

Clean Air Act and National Ambient Air Quality Standards

The CAA was enacted in 1963 but amended numerous times in subsequent years (1967, 1970, 1977, and 1990). The CAA establishes the National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The CAA also mandates that each state submit and implement a State Implementation Plan for local areas that fail to meet the standards. The plans must include pollution control measures that demonstrate how the standards will be met. Because the project site is within the SDAB, it is in an area that has been designated as a nonattainment area for certain pollutants that are regulated under the CAA.

The 1990 amendments to the CAA identify specific emissions reduction goals for areas that fail to meet the NAAQS. These amendments require both a demonstration of reasonable progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. The sections of the CAA that would most substantially affect development of the proposed project include Title I (Nonattainment Provisions) and Title II (Mobile-Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for criteria pollutants. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and adopt a standard for PM2.5. The 8-hour O_3 NAAQS was further amended in October 2015.

State

The California CAA, signed into law in 1988, requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS incorporate additional standards for most criteria pollutants and set standards for other pollutants that have been recognized by the state. In general, the California standards are more health protective than the corresponding NAAQS. California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The SDAB is in compliance with the California standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride.

Local

The SDAPCD has local air quality jurisdiction over projects in San Diego County. Responsibilities of the air district include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of the environmental documents required by CEQA. The SDAPCD is also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that the NAAQS and CAAQS are met.

The SDAPCD has adopted air quality plans to improve air quality, protect public health, and protect the climate. The San Diego RAQS identifies feasible emissions control measures and facilitates expeditious progress toward attaining the state ozone standards.

Impact Analysis

Would the project:

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

Less-than-Significant Impact. Implementation of the proposed project would include subdividing two parcels into 19 lots for future development. Construction is not currently included in the proposed project; however, it is reasonably foreseeable that development of the project site would include construction activities in the future. For the purpose of this air quality analysis, assumptions of construction activities have been made, which are based on the proposed project. Project construction would comply with SDAPCD Rules and Regulations, including Rules 50, 51, and 55, which forbid visible emissions, forbid nuisance activities, and require fugitive dust control measures, respectively. Although the project would change land uses, it would result in a negligible increase in the number of motor vehicle trips to the project site. However, the project includes an amendment to the General Plan, which would result in a minor increase in residential units but falls within SANDAG's growth projections. Therefore, the project would be considered consistent at a regional level with the underlying growth forecasts in the RAQS. The impact would be less than significant.

Construction activities associated with the proposed project would generate short-term emissions of reactive organic gas (ROG), nitrogen oxide (NO_X), CO, sulfur oxide (SO_X), PM10, and PM2.5. Exhaust emissions would originate from construction equipment, employee vehicle trips, and vendor vehicle trips. Fugitive dust would be generated during site-preparation activities; no demolition or grading activities are anticipated to occur. Evaporative ROG would be emitted during paving and application of architectural coatings and asphalt paving. Construction-related emissions would vary substantially, depending on the level of activity, the specific construction operations, and wind and precipitation conditions.

Construction activities are anticipated to begin in September 2019, and continue for 12 months. Construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.1. During construction, it was assumed that site preparation and building construction would not overlap with any phase of construction, the project site would be graded and the paving and architectural coating phases would overlap. Thus, emissions from the paving and architectural coatings phases were combined to calculate the proposed project's maximum daily emissions. SDAPCD's trigger levels, outlined in Regulation II, Rule 20.2,[1] were used to determine the significance of construction-related emissions.

Maximum daily construction emissions during each construction year are summarized in Table 3-1. Please refer to Appendix A for model outputs. As shown in Table 3-1, estimated maximum daily construction emissions would not exceed SDAPCD's significance thresholds for any criteria pollutant. Moreover, the proposed project would be required to comply with SDAPCD rules and regulations, including Rules 50, 51, and 55, as described above in Item IIIa.

Table 3-1. Estimate of Daily Construction Emissions (pounds per day)

Construction Year	ROG	NO_X	CO	SO_X	PM10	PM2.5
2018	4.6	48.3	23.1	< 0.1	20.8	12.3
2019	66.6	21.3	17.5	< 0.1	1.4	1.2
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Threshold?	*No*	*No*	*No*	*No*	*No*	*No*

Source: CalEEMod (see Appendix A).

Once operational, the proposed project would result in an increase in long-term operational emissions, relative to existing conditions, because of an increase in criteria pollutant emissions from area, energy, and mobile sources. Long-term daily operational emissions are presented in Table 3-2.

Table 3-2. Estimate of Daily Operational Emissions (pounds per day)

Emission Source	ROG	NO_X	CO	SO_X	PM10	PM2.5
Area	36	1	45	< 1	6	6
Energy	< 1	< 1	< 1	< 1	< 1	< 1
Mobile	< 1	2	5	< 1	1	< 1
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Threshold?	*No*	*No*	*No*	*No*	*No*	*No*

Source: CalEEMod (see Appendix A).

As shown in Table 3-2, operational emissions would be below SDAPCD trigger levels for all criteria pollutants. Therefore, this impact is considered less than significant. No mitigation is required.

b. Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment for an applicable federal or state ambient air quality standard?

Less-than-Significant Impact. Proposed project activities would not result in a cumulatively considerable net increase in criteria pollutants in a nonattainment region. The project site is in the SDAB, which is classified as a nonattainment area for certain federal and state criteria pollutants, including O_3, PM10, and PM2.5. Construction of the project would generate O_3 precursors, PM10, and PM2.5. However, because the project would not require demolition or extensive grading activities, and emissions from construction would be temporary and localized, project construction emissions would be minimal and would not exceed SDAPCD's thresholds of significance for construction (refer to Table 3-1). Additionally, the proposed project would result in a negligible increase in the number of automobile trips. However, operational emissions associated with the proposed project would not exceed SDAPCD's thresholds of significance for operations (refer to Table 3-2). The project would comply with all required SDAPCD rules, regulations, and fugitive dust measures. This impact would be less than significant.

c. Expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant Impact. The proposed project would not expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors are facilities and structures where people

live or spend considerable amounts of time, including retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities. The proposed project is near existing residences and school facilities. The nearest off-site residence is approximately 50 feet from the project site, while the nearest school (Southern California Seminary) is approximately 200 feet from the project site. The primary pollutants of concern with respect to human health risks are diesel particulate matter (DPM), CO hot spots, and asbestos.

Diesel Particulate Matter

Project construction would generate DPM, which is classified as a carcinogen by ARB. Cancer health risks associated with exposure to diesel exhaust are typically associated with chronic exposure, in which a 70-year exposure period is assumed. In addition, DPM concentrations and associated health risks dissipate as a function of distance from the emissions source.

Construction would occur over 12 months. Given the size and nature of the project, the construction time period would be significantly shorter than the 70-year exposure period typically associated with chronic cancer health risks from exposure to DPM. Construction would occur within 50 feet of nearby residential receptors and 200 feet of school receptors. However, construction-related DPM emissions would be minor and temporary, and compliance with SDAPCD rules would reduce construction-related emissions. Accordingly, potential health risks to off-site residential receptors and students would be minor, temporary, and far below risk-related thresholds. Thus, impacts from DPM would be less than significant.

The proposed project would not generate any additional DPM during normal building operations or result in additional diesel truck traffic, relative to existing conditions. Accordingly, operation of the proposed project would not expose sensitive populations to substantial DPM concentrations.

Carbon Monoxide Hot Spots

Elevated CO concentrations are typically found in areas with significant traffic congestion. CO is a public health concern because it combines readily with hemoglobin and reduces the amount of oxygen transported in the bloodstream. Although implementation of the project would lead to a minor increase in the number of motor vehicle trips to the project site, the traffic study indicates that the proposed project would not result in significantly congested roadways and intersections near the project site. Thus, the proposed project would not result in elevated pollutant concentrations (i.e., carbon monoxide hot spots) at on- or off-site roadways and intersections or expose sensitive populations to substantial CO concentrations. This impact would be less than significant.

Asbestos

Disturbances of asbestos-containing materials (ACMs) could occur on the project site if soil-disturbing activities (e.g., site preparation, grading) disturb asbestos-containing soil. The U.S. Environmental Protection Agency's (EPA's) asbestos-related National Emissions Standards for Hazardous Air Pollutants (NESHAP) protect the public by minimizing releases of asbestos fibers during activities involving the processing, handling, and disposal of ACM. Compliance with the asbestos-related NESHAP would be mandatory if ACM is found on the site. This impact would be less than significant.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

No Impact. Project-related odor emissions would be minimal and would not affect a substantial number of people. During construction activities, emissions from construction equipment may be evident in the immediate area on a temporary basis. Potential sources that may emit odors during construction include architectural coating and asphalt paving activities. Additionally, material deliveries and heavy-duty off-road equipment could create an occasional "whiff" of diesel exhaust for nearby receptors. These odors would be short term and not likely to result in nuisance odors that would violate SDAPCD Rule 51. Also, the proposed project would not generate operational odors that would affect a substantial number of people. There would be no impact.

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

Environmental Setting

Biological Survey

ICF botanist Lance Woolley and ICF wildlife biologist Courtney Casey performed a habitat assessment in conjunction with vegetation mapping in the survey area on June 21, 2017 (Table 3-3). Prior to conducting this field work, ICF's biologists reviewed the background information provided in the previous environmental documentation for the project site.

Table 3-3. Biological Surveys

Survey	Date	Personnel
Habitat assessment for special-status plants and animals	June 21, 2017	Courtney Casey and Lance Woolley
Vegetation mapping	June 21, 2017	Lance Woolley

Vegetation Communities

Two land cover types occur within the survey area, disturbed habitat and urban/developed (Figure 3-1; Table 3-4). A photo log showing the two land cover types is provided as Appendix B: Biological Resources Memorandum.

Table 3-4. Vegetation Communities and Land Cover Types

Vegetation Community/Land Cover Type	North Parcel (acres)	South Parcel (acres)
Disturbed habitat	2.75	4.09
Urban/developed	0.83	0.39
TOTAL	**3.58**	**4.48**

Special-Status Species

Special-Status Plant Species

Based on the literature review and field surveys conducted for the proposed project, special-status plant species were evaluated for their potential to occur on the project site (Appendix B). Three special-status plant species are known within 1 mile of the project site: San Diego ambrosia (*Ambrosia pumila*), Dean's milk-vetch (*Astragalus deanei*), and Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*). These three species are not expected to occur on the project site because of a lack of suitable habitat. The project site consists of paved areas as well as areas that are dominated by nonnative species, which are periodically mowed. No other special-status plant species are expected to occur on the project site.

Special-Status Wildlife Species

No critical habitat, as designated by the U.S. Fish and Wildlife Service, for any special-status wildlife species is present on the project site (U.S. Fish and Wildlife Service 2017). Based on the literature review and field surveys conducted for the proposed project, special-status plant species were evaluated for their potential to occur on the project site (Appendix B). Nine special-status wildlife species were assessed: orange-throat whiptail (*Aspidoscelis hyperythra*), coast horned lizard (*Phrynosoma blainvillii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), coastal California gnatcatcher (*Polioptila californica californica*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Townsend's big-eared bat (*Corynorhinus townsendii*), San Diego desert woodrat (*Neotoma lepida intermedia*), and American badger (*Taxidea taxus*). These nine species are not expected to occur on the project site because of a lack of suitable habitat. The project site consists of paved areas as well as areas that are dominated by nonnative species, which are periodically mowed. No other special-status wildlife species are expected to occur on the project site.

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ICF

Figure 3-1
Vegetation Communities
Madison Avenue Residential Project

Migratory Birds

The federal Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] Section 703(a)), enacted in 1916, prohibits any person, unless permitted by regulation, to engage in any action to:

> …pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport, cause to be transported, carry, or cause to be carried or receive for shipment, transportation, carriage, or export any migratory bird, any part, nest, or egg of any such bird, or any product…composed in whole or part, of any such bird or any part, nest, or egg thereof…

The statute was extended in 1974 to include parts of birds as well as eggs and nests. The list of migratory birds includes nearly all species that are native to the United States. The Migratory Bird Treaty Reform Act of 2004 further defined the species that are protected under the act and excludes all nonnative species.

Impact Analysis

Would the project:

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

Less-than-Significant Impact with Mitigation Incorporated. The only vegetation on the project site occurs within disturbed habitat and urban/developed land cover types. Neither of these communities is considered a sensitive vegetation community. As such, implementation of the proposed project would not disturb any sensitive vegetation communities. Special-status plant and wildlife species are not expected to occur within the proposed project because of a lack of suitable habitat. No impacts on special-status plants or special-status wildlife species are expected to occur with implementation of the proposed project. As such, there is no sensitive or riparian habitat on the project site that could be inhabited by federally or state-listed biological species.

The potential exists for impacts on migratory birds that are protected under the MBTA if construction occurs during the nesting bird season. Construction activities could disrupt breeding and foraging activities and prevent birds from attending to nests. Such activities could also cause birds to flush from their nests, thereby endangering eggs and chicks, if trees are removed or trimmed while the nests are active.

To ensure compliance with the MBTA and California Fish and Game Code Sections 3503 and 3503.5, mitigation measure **MM-BIO-1** would be implemented. Mitigation measure **MM-BIO-1** would require a qualified biologist to conduct pre-construction nesting bird surveys if vegetation removal and construction occur during the avian breeding season (generally from February 15 to August 31). With implementation of mitigation measure **MM-BIO-1**, potential impacts on nesting migratory birds and raptors would be less than significant.

> **MM-BIO-1: Pre-construction Nesting Bird Surveys.** To comply with the federal MBTA and California Fish and Game Code Sections 3503 and 3503.5, potentially significant impacts on tree-nesting raptors and other birds that are protected under the MBTA would be avoided by

restricting vegetation clearing or grading during the breeding season for migratory birds (approximately February 15 to August 31 annually), unless, through pre-construction nesting bird surveys by a qualified biologist, it is determined that no nesting birds that are protected by the MBTA are located within grading/vegetation-clearing areas. If active nests are identified within the on-site impact area, all construction activities in proximity to active nests shall be delayed or otherwise modified as necessary to prevent nest failure caused by construction activities.

The mitigation measure would help the proposed project avoid and minimize impacts on, as well as disturbances of, nesting birds. Therefore, impacts would be less than significant with mitigation incorporated.

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

No Impact. As discussed in Item IVa, above, there are no sensitive vegetation communities or areas of riparian habitat on the site (California Department of Fish and Wildlife 2017). As such, no riparian or other sensitive natural community would be affected by implementation of the proposed project. No impact would occur.

c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site consists entirely of disturbed land. No state or federally protected wetlands, are located on the project site. Construction and operation of the proposed project would occur entirely within the existing developed area. Therefore, the proposed project would not affect any state or federally protected wetlands, either directly or indirectly, and no impacts would occur.

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

Less than Significant. The project site consists entirely of disturbed land. It is not a wildlife corridor or a nursery site. As a result, the proposed project would not interfere with the movement of wildlife and would not affect wildlife corridors. As discussed above under Item IVa, potential impacts on migratory birds and raptors could occur if work occurs during the breeding season (February 15 to August 31). As discussed in Item IVa, above, the proposed project would implement **MM-BIO-1** to ensure compliance with the MBTA. As such, impacts on potential nesting birds are not anticipated, impacts would be less than significant.

e. Conflict with any local policies or ordinances to protect biological resources, such as a tree preservation policy or ordinance?

No Impact. The project site has been previously graded. All proposed construction activities would occur within the boundaries of the site. Some on-site vegetation might be disturbed during construction activities; however, the on-site trees are not subject to any tree preservation policy or ordinance. As such, the proposed project would not conflict with any local policies and/or ordinances. No impact would occur.

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

No Impact. The County of San Diego developed the Multiple Species Conservation Program (MSCP), which is a comprehensive, long-term habitat conservation plan that addresses issues related to the needs of multiple species and the preservation of natural vegetation communities in the San Diego region (County of San Diego 1997). The project site is not in a sensitive area, and project implementation would not conflict with applicable Habitat Conservation Plans. No impact would occur.

V. Cultural Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource, pursuant to Section 15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Environmental Setting

Record Search

ICF conducted a cultural resources records search on June 26, 2017, at the South Coast Information Center (SCIC) as part of the *Shadow Mountain Residential Project, San Diego County, California – Preliminary Cultural Resources Assessment* (Appendix C). The records search included a review of all available cultural resources surveys, excavation reports, and site records for the current project area and a 1-mile radius. In addition, the National Register of Historic Places (National Park Service 2010) as well as documents and inventories from the California Office of Historic Preservation (COHP), including the lists of California Historical Landmarks (COHP 2010a), California Points of Historical Interest (COHP 2010b), Listing of National Register Properties (COHP 2010c), and Inventory of Historic Structures (COHP 2010d), were consulted. Historic maps, including the El Cajon 1872, 1939, 1942, and 1955 quadrangle maps, were also examined.

The results of the records search indicate that 10 resources are within 1 mile of the project site, but none are within the project site. Seven of the resources (CA-SDI-17355, CA-SDI-17356, CA-SDI-17357, CA-SDI-17358, CA-SDI-17359, CA-SDI-17360, CA-SDI-17361) are small bedrock milling features with two to four milling slicks each. CA-SDI-17356 also contains an associated mano, and CA-SDI-17357 has an associated Tizon brownware body sherd. Previously recorded prehistoric site CA-SDI-7166 is larger and contains a flaked stone lithic scatter (including tools), groundstone artifacts, faunal remains, hearth features, and multiple bedrock milling features. Previously recorded prehistoric site CA-SDI-5509 is a lithic scatter with 30 flakes. The single previously recorded historic site (CA-SDI-13139H) is the Suncrest Truck Trail, which is a dirt road with trash deposits along it dating from the 1940s to the present.

Native American Outreach

A letter was sent to the Native American Heritage Commission (NAHC) on June 20, 2017, requesting a Sacred Lands File search and list of potentially interested Native American groups and individuals. The NAHC responded on June 27, 2017, stating that a search of the Sacred Lands File revealed no sacred lands or traditional cultural properties in proximity to the area of potential effect (APE). The NAHC provided a list of 21 Native American contacts in San Diego County who might have

knowledge of cultural resources in the project area. Outreach letters and maps of the project APE were sent to the identified Native American groups on June 30, 2017. These letters included a description of the project area and maps that indicated the project location.

Native American outreach is ongoing, and the Native American groups or individuals who do not provide a written response will be contacted by telephone within 2 weeks to confirm that they received the initial contact letter and determine if they have any knowledge of cultural resources in the project vicinity. A summary of outreach conducted is provided in Table 3 of Appendix C. All Native American outreach correspondence is included in Appendix C. The City of El Cajon has also conducted Native American outreach. Please see Section XVII, *Tribal Cultural Resources*, for further discussion of the City's communication with Native American tribes.

Field Methods

ICF conducted a cultural resources pedestrian survey within the project area on June 21, 2017, using 10- to 15-meter transects. In the field, 7.5-minute U.S. Geological Survey (USGS) topographic maps and larger-scale aerial photographs were used as well as hand-held global positioning system (GPS) units with shapefiles of the study area for orientation and recording resources and survey coverage.

The topography of the north parcel is relatively flat. The south parcel is sloped with a prominent knoll on the eastern portion of the parcel. The south parcel had surface visibility ranging from 5 percent in the tall seasonal grasses to 100 percent on the roads. The ground has been completely disturbed by grading, as evidenced by push piles. Granite boulders were present at the bottom of the knoll, but they had been moved from their original locations. A few pieces of modern tiles and clear glass, along with modern irrigation pipes, were observed. Nonnative ornamental trees and shrubs have been planted around the campus. Seasonal grasses and mustard were present throughout the survey area.

The north parcel is completely disturbed and topographically flat. There is little vegetation because the areas are currently used for storage (e.g., trucks, bins, miscellaneous large parts). It is a graded, level dirt pad. Granite boulders have been moved to form piles around the project site. Seasonal grasses are present along the edges of the project site.

All granite boulders were surveyed for grinding. No cultural resources were observed within the project site.

Regulatory Setting

Native American Heritage Commission

California PRC Section 5097.91 established the NAHC, the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. California PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

California Public Records Act

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public related to "Native American

graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency."

California Health and Safety Code Sections 7050.5 and 7052

California Health and Safety Code Section 7050.5 declares that all ground disturbance must cease and the county coroner must be notified in the event of the discovery of human remains outside a dedicated cemetery. California Health and Safety Code Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code Section 622.5

California Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

California Public Resources Code Section 5097.5

California PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Government Code Section 65352.3 Consultation

Senate Bill (SB) 18 requires local governments to consult with tribes prior to making certain planning decisions and provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to approvals and amendments of both general plans (defined in Government Code Section 65300 et seq.) and specific plans (defined in Government Code Section 65450 et seq.).

Prior to the approval or amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts on, cultural areas on land within the local government's jurisdiction that could be affected by a proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).

Impact Analysis

Would the project:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No Impact. No cultural resources (i.e., archaeological sites, built environment resources) were identified on the project site. The project site has been significantly disturbed through intermittent development of properties over the past 50 years. As a result, the proposed project would not cause a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5, and no impacts would occur. Therefore, the proposed project would not affect potential historic resources. There would be no impact.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less-than-Significant Impact with Mitigation Incorporated. As previously mentioned, an ICF archaeologist conducted a record search on June 26, 2017, at the SCIC (Appendix C). The records search identified 10 resources within 1 mile of the project site, but none are within the project site. In addition, an ICF archaeologist conducted a cultural pedestrian survey within the project area on June 21, 2017, using 10- to 15-meter transects. The south parcel had surface visibility ranging from 5 to 100 percent. The area had been completely disturbed by grading. Granite boulders were present at the bottom of a knoll on the south parcel, but they had been moved from their original locations. The north parcel was completely disturbed. No cultural resources were observed on either parcel. Previous grading activities have most likely affected any previous resources.

Because of the previous and repeated ground disturbance on the project parcels, there is low potential for archaeological resources to be encountered during construction of the proposed project, particularly during grading or excavation. However, the destruction of any previously undiscovered archaeological resources would be considered a significant impact. To reduce potential impacts on potentially significant archaeological resources, mitigation measure **MM-CR-1** would be implemented, which would require additional cultural resources surveys if the project area changes. **MM-CR-2** requires all work to be halted if unanticipated cultural materials are found during the course of construction until a qualified archaeologist can assess the nature and significance of the find. With implementation of **MM-CR-1** and **MM-CR-2**, potential impacts on archaeological resources would be less than significant.

MM-CR-1: Conduct additional cultural resource studies if study area changes. If revisions to the project design result in the potential for project-related ground disturbance to occur outside of the current cultural resources study area, a cultural resources inventory shall be performed in these areas prior to project implementation. The results of the inventory shall be reported in a supplemental technical report and provided to the City for review.

MM-CR-2: Conduct Archaeological and Native American Monitoring during grading activity. A qualified archaeologist and a Native American Monitor shall monitor during all grading activities at the project site, in order to minimize disturbance of subsurface historic-period archaeological deposits.

- All proposed ground disturbance, including grading and excavation for the project site shall be monitored by a qualified archaeologist(s) who meets the Secretary of the Interior's Professional Qualifications Standards, as promulgated in Code of Federal Regulations (CFR), Title 36, Section 61.
- Prior to the start of construction, a monitoring plan shall be prepared that describes the nature of the archaeological monitoring work, procedures to follow in the event of an unanticipated discovery, and reporting requirements.

- The archaeologist shall be invited to the preconstruction meeting to inform all personnel of the high probability of historic archaeological materials being encountered during construction.
- If intact subsurface deposits are identified during construction, the archaeologist shall be empowered to divert construction activities away from the find and shall be given sufficient time and compensation to investigate the find and determine its significance. No soil shall be exported off site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.
- Recovered items shall be treated in accordance with current professional standards by being properly provenienced, cleaned, analyzed, researched, reported, and curated in a collection facility meeting the Secretary of the Interior's Standards, as promulgated in 36 CFR 79, such as the San Diego Archaeological Center. The costs for curation shall be included in the budget for recovery of the archaeological remains.
- A final cultural resources report shall be produced, which shall discuss the monitoring program and its results and shall provide interpretations of any recovered cultural materials.

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

Less-than-Significant Impact. The project site is not a formal cemetery or near a formal cemetery. The project area and vicinity are fully developed. There are no records of human remains being identified during development of the area. The site is not known to be on a burial ground. Therefore, it is highly unlikely that the proposed project would disturb any human remains during construction. However, should human remains be uncovered during construction, as specified by State Health and Safety Code Section 7050.5, no further disturbance would occur until the county coroner has made the necessary findings as to the origin and disposition, pursuant to PRC Section 5097.98. If such a discovery occurs, excavation or construction would halt in the area of the discovery, the area would be protected, and consultation and treatment would occur as prescribed by law. If the county coroner recognizes the remains to be Native American, he or she would contact the NAHC, which would appoint the Most Likely Descendant. Additionally, if the bones are determined to be Native American, a plan would be developed regarding the treatment of human remains and associated burial objects. The plan would be implemented under the direction of the Most Likely Descendant. Impacts would be less than significant.

VI. Energy	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	☐	☐	☐	☒
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Environmental Setting

Energy resources include electricity, natural gas and other fuels. The production of electricity requires the consumption or conservation of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. Energy production and energy use both result in the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emission of pollutants. Energy Use is typically quantified using the British Thermal Unit (BTU). The BTU is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit.

San Diego County is served by San Diego Gas and Electric (SDG&E), which provides energy service to over 3.4 million customers (with 1.4 million accounts) in the county and portions of southern Orange County. The utility has a diverse power production portfolio, composed of a variety of renewable and non-renewable sources. Energy production typically varies by season and by year. Regional electricity loads also tend to be higher in the summer because the higher summer temperatures drive increased demand for air-conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating.

Would the project:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?

No Impact. The proposed project consists of the residential subdivision of 19 parcels. The project would be designed and constructed in compliance with the existing land use and zoning designations of the subject property. Overall, the construction and operation of this proposed project would not require the creation of a new source of energy construction.

During construction, there would be a temporary consumption of energy resources required for the movement of equipment and materials; however the duration and area of construction is minimal. Compliance with local, State, and federal regulations would reduce short-term energy demand during the project's construction to the extent feasible, and the project construction would not result in a wasteful or inefficient use of energy. There would be no impact.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. State and local agencies regulate the use and consumption of energy through various methods and programs. As a result of the passage of Assembly Bill 32 (AB 32) (the California Global Warming Solutions Act of 2006) which seeks to reduce the effects of Greenhouse Gas (GHG) Emissions, a majority of the state regulations are intended to reduce energy use and GHG emissions. These include, among others, California Building Code (CBC) of Regulations Title 24 – Energy Efficiency Standards for Residential Buildings.

At a local level, the City Building Division enforces the applicable requirements of the Energy Efficiency Standards in Title 24. In addition, the City of El Cajon is in the process of developing a Climate Action Plan (CAP). The CAP will provide the City with actions to align with the statewide targets intended to reduce greenhouse gas (GHG) emissions. The main elements of the CAP will include and inventory of emissions, generating projections, identifying reduction targets and measures, and creating implementation and monitoring tools. The CAP efforts are underway with projected completion in Summer 2019.

Accordingly, the propose project would not conflict with or obstruct State or local plans for renewable energy or energy efficiency.

VII. Geology and Soils	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismically-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 an on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Environmental Setting

The north parcel is underlain by Placentia sandy loam, thick surface, 2 to 9 percent slopes. The northern portion of the south parcel is also underlain by Placentia sandy loam, thick surface, 2 to 9 percent slopes. The central portion is underlain by Fallbrook sandy loam, 9 to 15 percent slopes, eroded, as well as Fallbrook-Vista sandy loams, 15 to 30 percent slopes. The southern portion of the south parcel is underlain by Greenfield sandy loam, 0 to 2 and 2 to 5 percent slopes (USGS 2017).

Placentia soils have high shrink-swell behavior, Fallbrook and Fallbrook-Vista soils have moderate shrink-swell behavior, and Greenfield soils have low shrink-swell behavior (USDA 1973).

Southern California is a seismically active region where several known earthquake faults occur; however, no known active faults exist beneath the project site. The nearest active faults to the project site are the Rose Canyon Fault Zone, approximately 17 miles to the west, and La Nacion Fault Zone, approximately 10 miles southwest of the project site (SanGIS 2017).

Regulatory Setting

Alquist-Priolo Act

The primary purpose of the Alquist-Priolo Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The law requires the state geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults and issue locational maps to all affected cities, counties, and state agencies for their use in safe construction. Before a project may be permitted, a geologic investigation is required to demonstrate that proposed buildings would not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault. It must be set back from the fault (generally 50 feet). The project site is not in an Alquist-Priolo Zone.

Seismic Hazards Mapping Act of 1990

The California State Seismic Hazards Mapping Act of 1990 addresses earthquake hazards other than surface fault rupture, including liquefaction and seismically induced landslides. The state establishes city, county, and state agency responsibilities for identifying and mapping seismic hazard zones and mitigating seismic hazards to protect public health and safety. The act requires the California Department of Conservation, Division of Mines and Geology, to map seismic hazards and establishes specific criteria for project approval that apply within seismic hazard zones, including the requirement for a geological technical report.

California Building Code

The California Code of Regulations, Title 24 (California Building Code, or CBC), applies to all applications for building permits. The CBC (also called the California Building Standards Code) has incorporated the International Building Code, which was first enacted by the International Conference of Building Officials in 1927 but has been updated approximately every 3 years since that time. The current version of the CBC (2016) became effective on January 1, 2017.

Code requirements for ground shaking focus on two issues, with the most common issue pertaining to the imparting of inertial forces into buildings and structures. For this issue, ground shaking is oftentimes characterized in terms of a design response spectrum. The second issue (of equal significance) is the stability of the ground during ground shaking. For this second issue, analyses pertaining to slope instability, liquefaction, lateral spreading, and seismically induced ground settlement are commonly performed.

In past building codes, the design earthquake considered for both assessing ground stability and building design was based on the same level of earthquake. However, the 2016 building code considers different design earthquakes for different analyses. For example, when assessing liquefaction and soil strength loss, CBC Section 1803.5.12 states that the evaluation is to be carried out using site peak ground acceleration, earthquake magnitude, and source characteristics consistent with the maximum considered earthquake. This is roughly equivalent to the 2,000-year design event. For the assessment of building effects caused by earthquake loading, it is to be generally assessed using a response spectra, based on the design-level earthquake. This would be two-thirds of the response spectra ordinates, based on a response spectra corresponding to the maximum considered earthquake, or roughly equivalent to the 400-year design event.

Local agencies must ensure that developments in their jurisdictions comply with the guidelines contained in the CBC. However, cities and counties can adopt building standards beyond those provided in the code.

State Water Resources Control Board Construction General Permit (Order 2009-0009-DWQ)

Construction activities that disturb 1 acre or more of land and could adversely affect hydrologic resources must comply with the requirements of the State Water Resources Control Board (SWRCB) Construction General Permit (Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ). Under the terms of the permit, applicants must file a complete and accurate Notice of Intent with the SWRCB. Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a Storm Water Pollution Prevention Plan (SWPPP) with a site map that shows the construction site perimeter; existing and proposed buildings; lots; roadways; stormwater collection and discharge points; general topography, both before and after construction; drainage patterns across the project site; and the construction BMPs to be implemented to eliminate or reduce pollutants generated during construction.

Impact Analysis

Would the project:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

No Impact. The project site is in a seismically active region where several known earthquake faults occur; however, no known active faults exist beneath the project site. The nearest active faults to the project site are the Rose Canyon Fault Zone, approximately 17 miles to the west, and La Nacion Fault Zone, approximately 10 miles southwest of the project site. Additionally, the project site is not within an Alquist-Priolo Earthquake Fault Zone. The closest known Alquist-Priolo Earthquake Fault Zone is approximately 10 miles west of the project site (SanGIS 2017). Because the project site is not within a delineated earthquake fault zone, rupture of a known earthquake fault would not occur as a result of implementation of the project. Therefore, no impacts would occur.

ii. Strong seismic ground shaking?

Less-than-Significant Impact. The project site is in a known seismically active region where the potential for seismic hazards exists. Although no active or potentially active faults are within the project site itself, Southern California in general is a seismically active area. A seismic event on local faults could cause significant ground shaking on the project site. The County of San Diego Multi-Jurisdictional Hazard Mitigation Plan identified the project area as having "low shake potential." Additionally, the design and construction of the proposed project would comply with all seismic safety development requirements, including Title 24 standards of the 2016 CBC. Conformance with all applicable seismic safety development requirements would minimize seismic ground shaking effects in the event of a major earthquake and ensure that potential seismic or geologic hazard impacts, including strong seismic ground shaking, would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less-than-Significant Impact. The project site is not mapped as being within a liquefaction hazard zone. However, the north parcel is south of an area of quaternary alluvium and approximately 75 feet east of an area of National Earthquake Hazards Reduction Program (NEHRP) Type D soil. The south parcel is approximately 240 feet east of an area of NEHRP Type D soil. NEHRP rates soils according to their softness. Harder soils are Types A through C, and softer soils are Types D and E. Liquefaction risk is considered higher if soft soils are present. Because the proposed project would not be constructed on soft soils, the potential impact from seismically related ground failure would be less than significant.

iv. Landslides?

Less-than-Significant Impact. The County of San Diego Multi-Jurisdictional Hazard Mitigation Plan (2004) does not identify the project site as "high" or "moderate" with respect to landslide susceptibility or soil-slip susceptibility. Conformance with all applicable seismic safety development requirements would minimize seismic ground shaking effects in the event of a major earthquake and ensure that potential seismic or geologic hazard impacts, including landslides, would be less than significant.

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

Less-than-Significant Impact. The north parcel is underlain by Placentia sandy loam, thick surface, 2 to 9 percent slopes. The northern portion of the south parcel is also underlain by Placentia sandy loam, thick surface, 2 to 9 percent slopes. The central portion is underlain by Fallbrook sandy loam, 9 to 15 percent slopes, eroded as well as Fallbrook-Vista sandy loams, 15 to 30 percent slopes. The southern portion of the south parcel is underlain by Greenfield sandy loam, 0 to 2 and 2 to 5 percent slopes (USGS 2017). Placentia soils have high shrink-swell behavior, Fallbrook and Fallbrook-Vista soils have moderate shrink-swell behavior, and Greenfield soils have low shrink-swell behavior (USDA 1973). In addition, the SWPPP prepared for the project would identify BMPs to reduce soil erosion during construction. As such, the proposed project would not result in substantial soil erosion or the loss of topsoil, and impacts would be less than significant.

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

Less-than-Significant Impact. As mentioned above, the proposed project would not be located in a liquefaction or landslide hazard zone. The project site has been identified as having low shake potential. All work would occur within the existing developed or previously graded portions of the campus. The proposed project would not extend into any undeveloped or previously undisturbed areas that may become unstable as a result of the project, resulting in potential landslides on- or off-site. Therefore, the underlying geologic structure of the project site would not become unstable as a result of the project and potentially result in an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, impacts would be less than significant.

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

Less-than-Significant Impact. As discussed above for Item VIa.iii, the project site and surrounding areas are developed on terrain with nominal risks for geologic hazards. The project site is underlain by a variety of soils that range from high to low shrink-swell behavior. The project site is graded, and the underlying soils are already disturbed. Therefore, impacts related to substantial risks to life or property from expansive soils would be less than significant.

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

No Impact. No septic tanks or alternative wastewater disposal systems are proposed; therefore, no impact would occur.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. As part of the *Shadow Mountain Residential Project, San Diego County, California – Preliminary Cultural Resources Assessment* (Appendix C), completed by ICF on July 25, 2017, a review of potential paleontological resources was conducted. Geological maps were examined to identify possible paleontologically sensitive areas. The entire project site is within the Peninsular Ranges Region, and the associated geological map unit is labeled "Kgt." This represents an intrusive tonalite from the Cretaceous period. It has been identified as a geological formation that is not sensitive for paleontological resources. Therefore, the proposed project would not be anticipated to directly or indirectly destroy unique paleontological resources, sites, or geologic features, and there would be no impact.

VIII. Greenhouse Gas Emissions	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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 emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Setting

According to EPA, a greenhouse gas (GHG) is any gas that absorbs infrared radiation in the atmosphere. This absorption traps heat within the atmosphere, maintaining the Earth's surface temperature at a level higher than would be the case in the absence of GHGs. Increasing levels of GHGs resulting from human activities have increased levels of most of these naturally occurring gases in the atmosphere, which has resulted in and will continue to result in an increase in the temperature of the Earth's lower atmosphere, a phenomenon that is commonly referred to as *global warming*. Warming of the Earth's lower atmosphere induces a suite of additional changes, including changes in global precipitation patterns; ocean circulation, temperature, and acidity; global mean sea level; species distribution and diversity; and the timing of biological processes. These large-scale changes are collectively referred to as *global climate change*.

The GHGs listed by the Intergovernmental Panel on Climate Change include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (Intergovernmental Panel on Climate Change 2007). California law and the State CEQA Guidelines contain a similar definition of GHGs (Health and Safety Code Section 38505(g); 14 California Code of Regulations Section 15364.5). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic (human-made) sources.

To simplify reporting and analysis, GHGs are commonly defined in terms of a global warming potential (GWP). The Intergovernmental Panel on Climate Change defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO_2 equivalents (CO_2e). The GWP of CO_2 is, by definition, 1. GHG emissions are quantified and presented in terms of metric tons (MT) of CO_2e emitted per year.

Regulatory Setting

State

State CEQA Guidelines Section 15064.4 provides guidance to lead agencies for determining the significance of impacts from GHG emissions. Section 15064.4(a) states that a lead agency should make a good-faith effort, based, to the extent possible, on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. State CEQA Guidelines

Section 15064.4(b) also states that, when assessing the significance of impacts from GHG emissions, a lead agency should consider (1) the extent to which the project may increase or reduce GHG emissions compared with existing conditions, (2) whether the project's GHG emissions would exceed a threshold of significance that a lead agency determines to be applicable to the project, and (3) the extent to which the project would comply with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The State CEQA Guidelines do not provide numeric or qualitative thresholds of significance for evaluating GHG emissions. Although SDAPCD has not adopted a threshold for assessing the significance of GHG emissions for land use development projects, SDAPCD has suggested that it would be appropriate for a lead agency to use a threshold of 3,000 MT of CO_2e per year.

The City of El Cajon has not yet adopted thresholds for evaluating the significance of GHG impacts and are in the process of developing a Climate Action Plan (CAP). The CAP will provide the City with actions to align with the statewide targets intended to reduce greenhouse gas (GHG) emissions. The main elements of the CAP will include and inventory of emissions, generating projections, identifying reduction targets and measures, and creating implementation and monitoring tools. The CAP efforts are underway with projected completion in Summer 2019. The significance of the project's GHG emissions is based on consistency with Assembly Bill (AB) 32. The AB 32 Scoping Plan details specific GHG emissions reduction measures that target specific GHG emissions sources. The Scoping Plan considers a range of actions. These include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms (e.g., a cap-and-trade system), including mobile-source emissions reduction measures (e.g., Pavley, Low-Carbon Fuel Standard, vehicle efficiency measures), energy production–related emissions reduction measures (e.g., natural gas transmission and distribution efficiency measures, natural gas extraction efficiency measures), and the Renewables Portfolio Standard (electricity).

Impact Analysis

Would the project:

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

Less-than-Significant Impact. Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHG in the atmosphere. Rising atmospheric concentrations of GHGs, in excess of natural levels, result in increasing global surface temperatures—a phenomenon commonly referred to as *global warming*. The primary associated GHG emissions are CO_2, CH_4, N_2O, and fluoridated compounds. AB 32 sets forth the regulatory framework in California to reduce emissions to 1990 levels by 2020. SB 32 builds on AB 32 and establishes a longer-term goal of 40 percent below 1990 levels by 2030. Unlike criteria pollutants, which are primarily pollutants of regional and local concern, GHGs are a global problem. Therefore, GHG impacts, and the analysis contained herein, are inherently cumulative.

The State CEQA Guidelines do not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance that were previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (State CEQA Guidelines Sections 15064.4(a) and 15064.7(c)). The

California Supreme Court decision[2] in *The Centers for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company* (November 30, 2015, Case No. S217763) (hereafter Newhall Ranch) confirmed that there are multiple potential pathways for evaluating project-level GHG emissions consistent with CEQA, depending on the circumstances of a given project. These potential pathways include reliance on business-as-usual models,[3] numeric thresholds, and compliance with regulatory emissions reduction plans and programs, including qualified Climate Action Plans.

The City has not yet formally adopted specific thresholds of significance with regard to GHG emissions, nor has the City adopted a qualified plan, policy, or regulation to reduce GHG emissions that qualifies for tiering in CEQA documents (per State CEQA Guidelines Section 15183.5(a)). Lead agencies throughout the state have adopted or recommended mass emissions thresholds for evaluating construction and operational emissions. Locally, both the City and County of San Diego have in the past recommended a 900 MT CO_2e screening level as a theoretical approach to identify commercial or residential projects that require further analysis and potential mitigation, but both agencies no longer provide any numerical bright-line recommendations. Project emissions below this 900 MT CO_2e level are considered less than cumulatively considerable; project emissions above this level require additional analysis. Moreover, projects that result in a net benefit by reducing GHG emissions are determined to have a less-than-significant impact related to GHG emissions. Recent court decisions, including Newhall Ranch, have recommended that analyses emphasize the consideration of GHG efficiency, and although CEQA requires a focus on the GHG efficiency of a proposed project, some projects are so small that it is highly unlikely they would generate a level of GHGs that would be cumulatively considerable. Of note is that the 900 MT CO_2e screening level was developed in the California Air Pollution Control Officers Association *CEQA & Climate Change* paper (2008) as a theoretical basis for screening out smaller residential and non-residential (commercial, office) uses that emit low levels of GHG emissions from further analysis. This 900 MT CO_2e screening level is based on land use–related emissions sources (e.g., on-road passenger vehicles, electricity and utility consumption) that are similar to residential-related emissions sources. This is the lowest numerical threshold recommended for use by any large jurisdiction in the state[4] (Association of Environmental Professionals 2016). Accordingly, the 900 MT CO_2e threshold is applicable to the proposed project and meets the criteria identified in the Newhall Ranch decision needed to appropriately analyze project-level GHG emissions (e.g., project-specific emission sources).

Project construction activities would generate short-term emissions of CO_2, CH_4, and N_2O as a result of off-road diesel equipment exhaust and emissions from construction employees' trips, material deliveries, and any haul truck travel needed to dispose of materials off-site. Annual GHG emissions were estimated using CalEEMod, version 2016.3.1, as presented in Table 3-5. Consistent with established protocols and published guidance from other lead agencies and air districts, total construction emissions have been amortized over the expected 30-year operational life for comparison to the 900 MT CO_2e threshold.

[2] It should be noted that the defendants in the Newhall Ranch case have requested a rehearing from the California Supreme Court on a number of grounds. If the Supreme Court decides to rehear the case, it is possible that the ruling may change.

[3] Only if "an examination of the data behind the Scoping Plan's [business-as-usual] model allowed the lead agency to determine what level of reduction from business as usual a new land use development at the proposed location must contribute in order to comply with statewide goals."

[4] Numerical thresholds adopted, proposed, or recommended throughout the state range from 1,100 to 100,000 MT CO_2e.

As shown in Table 3-5, total annual emissions associated with the proposed project are not anticipated to exceed the 900 MT CO_2e threshold. Accordingly, GHG emissions are not anticipated to exceed the relevant GHG threshold. This impact would be less than significant.

Table 3-5. Estimate of Annual GHG Emissions from Project Construction and Operations (metric tons per year)

Emission Source	CO_2	CH_4	N_2O	CO_2e
Construction				
2018	113	< 0.1	< 0.1	114
2019	214	0.1	< 0.1	215
Total Construction[a]	327	0.1	< 0.1	329
Amortized Construction [b]		-	-	11
Operations				
Operational Emissions	424	0.4	< 0.1	435
Total Project Emissions	-	-	-	446
Threshold[c]	-	-	-	*900*
Exceed Threshold?	-	-	-	*No*

Source: CalEEMod (see Appendix A).

[a] Values may not add because of rounding.

[b] Construction emissions are amortized over a 30-year period.

[c] The 900 MT CO_2e threshold applies to combined amortized construction and operational emissions.

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

Less-than-Significant Impact. As described in Item VIIa, the City of El Cajon is in the process of developing a Climate Action Plan. Therefore, the most applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions are AB 32 and SB 32, which codified the state's GHG emissions reduction targets for the future. Consistent with recent juridical and legislative action, this analysis also considers the long-range (2050) reduction target outlined in Executive Order S-3-05.[5]

ARB adopted the AB 32 Scoping Plan (2008) and the AB 32 Scoping Plan First Update (2014) as frameworks for achieving AB 32. The Scoping Plan and Scoping Plan First Update outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. These strategies are geared toward sectors and activities that generate significant amounts of GHGs. For example, the majority of measures address building energy, waste and wastewater generation, goods movement, on-road transportation, water usage, and high GWP gases. Implementation of the proposed project would not conflict with these statewide plans. Construction of the proposed project would be short term in nature, and emissions would not exceed any proposed threshold throughout the state, including the 900 MT CO_2e level referenced above. In addition, long-term project operations would not generate GHG emissions in excess of the 900 MT CO_2e threshold referenced above. ARB's draft Scoping Plan Update (2017) for achieving SB 32 extends and furthers many of the policies and programs included in the AB 32 Scoping Plan and AB 32 Scoping Plan First

[5] Executive Order S-3-05 establishes a goal of 80 percent below 1990 levels by 2050.

Update. The project therefore would neither conflict with implementation of AB 32 or SB 32 nor impede state progress toward meeting the long-range reduction target identified in Executive Order S-3-05. This impact would be less than significant.

IX. Hazards and Hazardous Materials	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would 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 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

Environmental Setting

The following hazardous materials information was collected from the Cortese List (Department of Toxic Substances Control [DTSC]) Hazardous Waste Tracking System; DTSC EnviroStor database; DTSC Cortese List (U.S. Environmental Protection Agency 2017); SWRCB GeoTracker database; SWRCB List of Facilities with Deed Restrictions; DTSC List of Facilities with Deed Restrictions; California Department of Resources Recycling and Recovery Solid Waste Information System; California Department of Oil, Gas, and Geothermal Resources; U.S. Pipeline and Hazardous Materials Safety Administration; National Pipeline Mapping System Map Viewer; and the U.S. Army Corps of Engineers Formerly Used Defense Sites Database. The San Diego County Multi-Jurisdictional Hazard Mitigation Plan (2017) and the California Department of Forestry and Fire Protection (CAL FIRE) Very High Fire Hazard Severity Zones in LRA map (2009) were also used in the discussion herein.

Hazardous Materials

On-site

The project site is not listed on any hazardous materials database lists described above.

Off-site

The SMCC site is listed on the SWRCB GeoTracker database as "Former Scott Memorial Baptist Church (T0607300809)" for a leaking underground storage tank (LUST). The LUST was in the middle of the SMCC facility, approximately 1,156 feet east of the project site. The site was closed by the Department of Environmental Health in 2009.

Nearby Schools

Four schools are within 2 miles of the project site. The closest is Christian Unified Schools, which has combined elementary, junior high, and high schools on the SMCC property. The schools are approximately 1,000 feet east of the project site. Granite Hills High School is approximately 0.5 mile to the west at 1719 East Madison Avenue, within the Grossmont Union High School District. Montgomery Middle School is approximately 1.6 miles to the west at 1570 Melody Lane, within the Cajon Valley Union School District. Madison Elementary School is 0.9 mile to the west at 1615 East Madison Avenue, within the Cajon Valley Union School District.

Nearby Airports

The project site is approximately 6 miles southeast of Gillespie Field. The nearest private airstrip is Lamps Airport, approximately 3 miles south of the project site.

Wildfire Risk

The project site is within a Non-Very High Fire Hazard Severity Zone, according to the CAL FIRE Very High Fire Hazard Severity Zones in LRA map (CAL FIRE 2009).

Regulatory Setting

Federal

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act (RCRA) established an EPA-administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous materials.

Cortese List

USC Section 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated wells for drinking water, sites listed by SWRCB as having LUSTs or discharges of hazardous wastes or materials into

water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

U.S. Department of Transportation Hazardous Materials Regulations (49 Code of Federal Regulations 100–185)

U.S. Department of Transportation Hazardous Materials Regulations cover all aspects of hazardous materials packaging, handling, and transportation. They include (but are not limited to) Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), and 177 (Highway Transportation).

State

California Health and Safety Code

DTSC, a department of the California Environmental Protection Agency, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Division 20, Chapter 6.5 of the California Health and Safety Code, deals with hazardous waste control through regulations pertaining to the transport, treatment, recycling, disposal, and permitting of hazardous waste. Division 20, Chapter 6.10, contains regulations that are applicable to the cleanup of hazardous materials releases. Title 22, Division 4.5, contains environmental health standards for the management of hazardous waste. This includes standards for the identification of hazardous waste (Chapter 11) and standards that are applicable to transporters of hazardous waste (Chapter 13).

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9)

This program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of environmental and emergency response programs and provides authority to the Certified Unified Program Agency (CUPA). The CUPA is designed to protect public health and the environment from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes. This is accomplished through inspections, emergency response actions, enforcement, and mitigation oversight. The CUPA for the City of El Cajon is the County of San Diego Department of Environmental Health, Hazardous Materials Division (County of San Diego 2017).

California Code of Regulations, Title 8—Industrial Relations

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal OSHA) and the federal Occupational Health and Safety Administration are responsible for ensuring worker safety in the workplace. Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would be applicable to both construction and operation of the proposed project. California Code of Regulations Title 8 pertains to hazard control (including administrative and engineering controls), hazardous chemical labeling and training, hazardous exposure prevention, hazardous material management, and hazardous waste operations.

California Labor Code (Division 5, Parts 1 and 7)

The California Labor Code is a collection of regulations that include workplace regulations to ensure appropriate training on the use and handling of hazardous materials as well as the operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5, ensures that employees who are in charge of handling hazardous materials are appropriately trained and informed about the materials. Division 5, Part 7, ensures that employees who work with volatile flammable liquids are outfitted with appropriate safety gear and clothing.

State Water Resources Control Board Construction Stormwater Program

Dischargers with projects that disturb 1 or more acre of soil or projects that disturb less than 1 acre but are part of a larger common plan of development that, in total, disturbs 1 or more acre are required to obtain coverage under a Construction General Permit. Construction activities that would be subject to this permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation. The Construction General Permit requires completion and implementation of a site-specific SWPPP.

Impact Analysis

Would the project:

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

Less-than-Significant Impact. Implementation of the proposed project would involve subdividing two parcels of land for the development of 19 single-family residential units. Construction of the residential units would involve the transport, use, and disposal of hazardous materials that are often used in construction, such as fuel, solvents, paints, oils, and lubricants. The use of such materials would comply with applicable regulations, such as the RCRA, U.S. Department of Transportation Hazardous Materials Regulations, and local regulations. These materials would be transported, used, and disposed of in small amounts. Furthermore, they do not represent acutely hazardous materials. Therefore, impacts would be less than significant.

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

Less-than-Significant Impact. Typical construction-related hazardous materials would be used during construction of the residential development, as discussed in Item VIIIa. During construction, it is possible that these substances may be accidentally released. However, compliance with federal, state, and local regulations, in combination with construction BMPs implemented from a SWPPP, as required by the Construction General Permit, would ensure that hazardous materials would be used and stored properly, thereby minimizing potential impacts due to an accidental release of hazardous materials. No acutely hazardous materials are expected to be used. In addition, the proposed project would not be constructed on a site with hazardous material contamination. Therefore, impacts would be less than significant.

c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Less-than-Significant Impact. The proposed project would be approximately 1,000 feet from the Christian Unified Schools campus, which includes elementary, junior high, and high schools. The campus is separated by Greenfield Drive and Southern California Seminary. No hazardous materials are expected to be used during construction, other than those that are typically associated with construction (e.g., diesel fuel, gasoline, oil, hydraulic fluid, engine exhaust, solvent for PVC material, asphalt and binders, paint). Any hazardous materials used during construction would be transported, used, and stored in accordance with state and federal regulations regarding hazardous materials. Operation of the proposed project would not involve the use of hazardous materials, substances, or waste. Therefore, construction and operational impacts would be less than significant.

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

Less-than-Significant Impact. A review of available online regulatory databases found that the project site is not listed in a hazardous materials database, including the DTSC Hazardous Waste Tracking System; DTSC EnviroStor database; DTSC Cortese List; SWRCB GeoTracker database; SWRCB List of Facilities with Deed Restrictions; DTSC List of Facilities with Deed Restrictions; California Department of Resources Recycling and Recovery Solid Waste Information System; California Department of Oil, Gas, and Geothermal Resources; U.S. Pipeline and Hazardous Materials Safety Administration; National Pipeline Mapping System Map Viewer; and the U.S. Army Corps of Engineers Formerly Used Defense Sites Database. The SMCC east campus was listed on the SWRCB GeoTracker database for a closed LUST site. The site, which was approximately 1,156 feet east of the proposed project site, was closed by the Department of Environmental Health in 2009. Therefore, the proposed project would not be located on or near a site that is found in a hazardous materials database. The impact would be less than significant.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. There are no airports within 2 miles of the project site; Gillespie Field is approximately 6 miles northwest of the project site. According to the Gillespie Field Airport Land Use Compatibility Plan, the project site is not within the Federal Aviation Administration (FAA) Height Notification Boundary (Airport Land Use Commission 2010). The FAA Height Notification Boundary extends 20,000 feet from the nearest point of any runaway. Within the boundary, Part 77, Subpart B, requires that the FAA be notified of any proposed construction or alteration having a height greater than an imaginary surface extending 100 feet outward and 1 foot upward from the runway elevation (slope of 100 to 1). The project site does not fall within the Airport Review Area, Airport Overflight Notification Area, or any safety zones designated for Gillespie Field. No impact would occur.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. The City of El Cajon has adopted the County of San Diego Multi-Jurisdictional Hazard Mitigation Plan. During construction and operation, the proposed project would comply with applicable measures in the plan as well as requirements of the Heartland Fire and Rescue Department and the City's General Plan. Evacuation instructions and routes are provided by the County of San Diego Emergency Operations Center (under the Emergency Management Division) and facilitated by the responding agencies, such as the Heartland Fire and Rescue Department and the El Cajon Police Department. In addition, the project does not include any elements (e.g., permanent road closures, long-term blocking of road access) that would physically impair or otherwise interfere with emergency response or evacuation in the project vicinity. Construction activities may temporarily inhibit traffic along Madison Avenue during activities such as material deliveries; however, this interruption would be short term. The proposed project would not result in permanent impacts on emergency response routes or plans. Therefore, the impact would be less than significant.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. The proposed project would involve subdividing two parcels into 19 lots for development of single-family homes. The project region is subject to wildfires because of its climate, topography, and native vegetation. State law requires that all local jurisdictions identify Very High Fire Hazard Severity Zones within their areas of responsibility (California Government Code Sections 51175–51189). Inclusion within these zones is based on vegetation density, slope severity, and other relevant factors that contribute to fire severity. According to information obtained from CAL FIRE, the project site is not within a Very High Fire Hazard Severity Zone (CAL FIRE 2009). Therefore, no impact would occur.

X. Hydrology and Water Quality	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i. result in substantial erosion or siltation on-site or off-site.	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.	☐	☐	☒	☐
iii. create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Environmental Setting

Regional Surface Water Hydrology

The project site lies within the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB). The San Diego region is divided into 11 hydrologic units (HUs). The HUs flow from elevated regions in the east to lagoons, estuaries, or bays in the west and have similar water quality characteristics and issues. The project site is within the San Diego HU.

The San Diego HU lies within the San Diego River Watershed Management Area and covers approximately 434 square miles within San Diego County, emptying into the Pacific Ocean at Dog Beach in Ocean Beach. The population of the watershed is 517,219, which is concentrated mostly in the Lower San Diego River Hydrologic Area, the area where the proposed project would be located (SWRCB 2015). The majority of the land within the watershed is undeveloped; remaining land uses include open space/parks and recreation, residential and spaced rural residential, and transportation.

There are no sensitive or highly valued receiving waters in the vicinity of the project site. Four water bodies within the watershed are listed as 303(d) impaired. One of these water bodies, Forester Creek, is downstream from the project site and listed for bacteria.

Project Site Surface Hydrology

Elevations across the north parcel range from approximately 610 feet above mean sea level (amsl) in the north to 595 feet amsl in the south. Runoff would travel to the west, then toward the southwest and Madison Avenue. Elevations across the south parcel range from 655 feet amsl in the east to 595 in the north. Runoff would travel to the western boundary of the property, then toward the northwest and southwest. Stormwater runoff is collected in existing stormwater facilities in the roadway.

Groundwater

According to the Helix Water District 2015 Urban Water Management Plan, the project site is not within an identified groundwater basin. The closest groundwater basin to the project site is the Middle Sweetwater Basin. The project site would receive municipal water service from the Helix Water District, which receives its water supply from the San Diego County Water Authority. The San Diego County Water Authority depends on imported water from the Colorado River and Northern California through the State Water Project. Currently, groundwater constitutes less than 1 percent of water resources (Helix Water District 2015).

Water-Related Hazards

Flooding

The Federal Emergency Management Agency (FEMA) delineates floodplains throughout the nation and presents the data on Flood Insurance Rate Maps (FIRMs). FEMA-designated 100-year floodplains in the San Diego HU are subject to inundation by flood events with a 1 percent annual chance. The project site is in Zone X, which contains areas with minimal flood hazards, areas that are outside the Special Flood Hazard Area, and areas that are higher in elevation than areas with a 0.2 percent annual change for a flood event (or 500-year flood) (FEMA 2012).

Dam Inundation

The closest dams to the project site are Chet Harritt Dam, approximately 3.8 miles to the north, and Murray Dam, approximately 10 miles to the west. However, the project site is outside of any of the dam inundation hazard zones (SanGIS 2017).

Tsunamis

A tsunami is a series of waves caused by a large-scale displacement of water, usually under the ocean, resulting from a massive underwater disturbance, such as an earthquake, volcanic eruption, or other explosion. The project site is approximately 20 miles from the Pacific Ocean. The likelihood of a tsunami to affect the project site is extremely low.

Seiches

Seiches are waves generated in an enclosed body of water, such as a natural lake or reservoir, by seismic activity. These tsunami-like waves can be generated by earthquakes, subsidence or uplift within large blocks of land, submarine and onshore landslides, sediment failures, and volcanic eruptions. The strong currents associated with these events may be more damaging than inundation by waves. San Diego Bay, an enclosed body of water, presents a potential risk related to seiches. However, the project site is approximately 15 miles northeast of San Diego Bay. The likelihood of a seiche to affect the project site is extremely low.

Mudflow

Mudflows occur predominantly in mountainous areas that are underlain by geologic formations that produce sandy soils. The project site is on relatively flat terrain. Overall, the potential for a mudslide at the project site is extremely low.

Regulatory Setting

Federal

Federal Emergency Management Agency

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations (e.g., limit development in floodplains). FEMA also issues FIRMs that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year.

FEMA has developed requirements and procedures for evaluating earthen levee systems and mapping for areas affected by those systems. Levee systems are evaluated for their ability to provide protection from 100-year flood events. The results of the evaluation are documented in the FEMA Levee Inventory System. Levee systems must meet minimum freeboard standards and be maintained according to an officially adopted maintenance plan. Other FEMA levee-system evaluation criteria include structural design and interior drainage.

Clean Water Act

EPA is the lead federal agency with responsibility for water quality management. The CWA is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. Under Section 401 of the CWA, an applicant for a Section 10 or 404 permit to discharge dredged or fill material into waters of the United States must first obtain a certificate from the appropriate state agency, stating that the fill is consistent with the state's water quality standards

and criteria. In California, the authority to either grant water quality certification or waive the requirement is delegated by the SWRCB to the nine RWQCBs.

Under federal law, EPA published water quality regulations in Volume 40 of the CFR. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. In California, EPA has given the SWRCB and its RWQCBs authority to identify beneficial uses and adopt applicable water quality objectives.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States from municipal separate storm sewer systems (MS4s). Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits for allowable concentrations and/or mass emissions of pollutants contained in a discharge, prohibitions on discharges that are not specifically allowed under the permit, and provisions that describe the required actions of the discharger, including industrial pretreatment, pollution prevention, self-monitoring, or other activities.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the state must adopt water quality policies, plans, and objectives that protect its waters for the use and enjoyment of the people. The Porter-Cologne Act sets forth obligations of the SWRCB and RWQCBs to adopt and periodically update water quality control plans (Basin Plans). Basin Plans are regional water quality control plans and required by both the CWA and Porter-Cologne Act. Under the Basin Plans, beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. San Diego falls under the San Diego Region Hydrologic Basin Planning Area.

The Porter-Cologne Act also requires waste dischargers to notify the RWQCBs of their activities by filing a Report of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, or other approvals.

SWRCB Construction General Permit (Order 2009-0009-DWQ)

Construction activities that disturb 1 acre or more of land that could adversely affect hydrologic resources must comply with the requirements of the SWRCB Construction General Permit (Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ). Under the terms of the permit, applicants must file a complete and accurate Notice of Intent with the SWRCB. Applicants

must also demonstrate conformance with applicable BMPs and prepare a SWPPP with a site map that shows the construction site perimeter; existing and proposed buildings; lots; roadways; stormwater collection and discharge points; general topography, both before and after construction; drainage patterns across the project site; and construction BMPs that eliminate or substantially reduce pollutants generated during construction.

Local

San Diego Integrated Regional Water Management Plan

In the San Diego region, there is a complex array of water supply, water management, water quality protection, pollution prevention, habitat protection, flood protection, and recreational needs. Numerous water management plans have been developed within the region to address these needs. However, jurisdictional and water management conflicts exist among the individual water management plans, and many challenges to identifying, addressing, and resolving water management issues also exist. The Integrated Regional Water Management Plan (IRWMP) was developed in 2007 to bring stakeholders together and coordinate a regional approach to water management issues, pursuant to the statewide IRWMP guidelines established by the SWRCB and California Department of Water Resources in 2004 and updated in 2007. The 2013 final draft IRWMP is now available.

Jurisdictional Runoff Management Plan

Under RWQCB Order No. R9-2013-0001, NPDES Permit No. CAS0109266, the 18 cities within San Diego County are required to prepare Jurisdictional Runoff Management Plans. Each jurisdictional plan must contain a component that addresses issues related to construction activities and a component that addresses issues related to existing development. As principal permittee, the County of San Diego prepares and submits an annual report on the unified Jurisdictional Runoff Management Plans that describes the progress of the programs and the strategies to reduce the discharge of pollutants of concern to the MS4 and receiving waters to the maximum extent practicable.

San Diego River Watershed Water Quality Improvement Plan

Development and implementation of a Water Quality Improvement Plan is required by the MS4 Permit (Order R9-2013-0001, NPDES No. CAS0109266) adopted by the San Diego RWQCB on May 8, 2013. The goal of the San Diego River Watershed Water Quality Improvement Plan is to further the CWA's objectives to preserve and restore water quality. The plan guides participating agencies' jurisdictional programs, including the City of El Cajon, to achieve the goals.

Impact Analysis

Would the project:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less-than-Significant Impact. The proposed project would not violate any water quality standards or waste discharge requirements. Details regarding the analysis of both construction and operations are provided below.

The proposed project could result in an increase in surface water pollutants, such as sediment, oil, and grease, from construction of the single-family homes, including grading and the installation of utilities and street infrastructure. Disturbed sediment could temporarily affect water quality because of increased stormwater runoff. In general, the delivery, handling, and storage of construction materials and wastes, as well as use of construction equipment, could introduce a risk of stormwater contamination if materials and wastes are not properly handled and contained. Staging areas or building sites can be sources of pollution because of the use and storage of equipment and materials during construction. Construction impacts on water quality are potentially significant and could lead to an exceedance of the water quality objectives or criteria specified in the San Diego RWQCB Basin Plan.

Construction of the proposed project would disturb more than 1 acre and, therefore, would be required to prepare and implement a SWPPP, in accordance with the Construction General Permit. The SWPPP would list the BMPs that would be implemented to provide sediment and erosion control, authorize waste handling measures, and protect areas from stormwater runoff. The BMPs would include practices to minimize contact between construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) and stormwater. The SWPPP would identify proper storage areas that would keep the materials out of the rain. BMPs would focus on sediment and erosion control, especially for grading activities.

Operation of the proposed project would increase impervious surfaces on the project site. Generally, stormwater would flow to the west and south, toward Madison Avenue and existing stormwater drainage facilities. The proposed project would implement treatment control BMPs and site design BMPs. Design plans would include one bioretention basin adjacent to Madison Avenue on the northern parcel and two bioretention basins on the southern parcel located in the northwestern and southwestern corners. The BMPs and compliance with the SWPPP would ensure the impacts on water quality would be less than significant.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact. The proposed project would involve subdivision of two parcels into 19 lots for development of single-family homes. Development of the residences would increase impervious surfaces on the project site and, thus, reduce the infiltration of water into the groundwater basin. However, the proposed project would receive water from the municipal water supplier and would not use groundwater or otherwise affect groundwater levels. Therefore, there would be no impact on groundwater supplies.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in substantial erosion or siltation on-site or off-site?

Less-than-Significant Impact. No stream, river, or other body of water exists on the project site. Surface water on the north parcel would drain to the southwest, and surface water on the south parcel would drain to the northwest and southwest. The proposed project would not alter these drainage patterns and would maintain existing drainage easements along Madison Avenue.

Therefore, the proposed project would not alter on-site drainage and result in substantial erosion or siltation. The impact would be less than significant.

ii. substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site?

Less-than-Significant Impact. As discussed in Item IXc, no stream, river, or other body of water exists on the project site. The proposed project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. The proposed project would include the potential future construction of a bioretention basin on the north parcel and two permanent bioretention areas on the south parcel for drainage, which would minimize ponding and flooding on site. Therefore, the proposed project would not cause the rate or amount of surface runoff to result in flooding on or off site, and impacts would be less than significant.

iii. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less-than-Significant Impact. The proposed project would result in an increase in impervious surfaces. However, the proposed project would include implementation of BMPs during construction to reduce potential runoff that could flow to existing stormwater drainage systems. The site design would include permanent BMPs, such as a bioretention area, to prevent additional sources of pollution from entering the stormwater drainage system. Therefore, the proposed project would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or substantial additional sources of polluted runoff. The impacts would be less than significant.

iv. Impede or redirect flood flows?

Less-than-Significant Impact. The proposed project would not be located within a 100-year flood hazard area, as mapped on FIRMs. The site is designated as Zone X and would not impede or redirect flood flows. Therefore, the impact would be less than significant.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. The project site is approximately 20 miles from the Pacific Ocean and approximately 15 miles from San Diego Bay. The site is not within a FEMA-designated 100-year flood zone or the inundation areas for the closest dams (i.e., Chet Harritt Dam, approximately 3.8 miles to the north, and Murray Dam, approximately 10 miles to the west). Impacts from a flood hazard, tsunami or seiche are therefore unlikely. Additionally, the topography of the project site is relatively flat, except for a knoll on the south parcel. Therefore, the proposed project would not risk release of pollutants due to project inundation, and no impact would occur.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. The proposed residential subdivision will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, no impact would occur.

XI. Land Use and Planning	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental Setting

The project site is made up of two parcels divided by Madison Avenue, which runs between them. The north parcel is a 3.58-acre parcel at 2000 East Madison Avenue with one residence and improvements. The south parcel is a 4.66-acre parcel at 2075 East Madison Avenue that includes a driveway and landscaped open land. The north parcel assessor's parcel number (APN) is 508-120-18, and the south parcel APN is 512-13-035.

Regulatory Setting

City of El Cajon General Plan

The City of El Cajon General Plan establishes goals and policies that are used to implement desired development in the City. The north parcel has a General Plan land use designation of Parochial School. The south parcel has a General Plan land use designation of Low-Low Density Residential, which calls for three, or fewer, dwelling units per net acre (City of El Cajon 2000). Land uses in the general vicinity are designated as Low-Low Density Residential, and School Playground/Playfield. Figure 3-2 shows the existing land use designations. Below are the goals, objectives, and policies that pertain to the proposed project.

Goal 5: A broad range of housing types will be made available to meet the housing needs of various age and income groups.

Objective 5-2: Encourage the adequate provision of housing by location, type of unit, and price to meet the existing and future needs of El Cajon residents.

Policy 5-2.1: The City will provide a variety of residential development opportunities in the City to fulfill regional housing needs.

Policy 5-2.2: The City will facilitate the production of housing for all segments of the population, including those with special needs.

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Figure 3-2
Existing Land Use and Zoning
Madison Avenue Residential Project

Objective 5-3: Provide increased opportunities for home ownership.

Objective 5-6: Ensure that new housing is compatible with existing development and sensitive to environmental needs.

Policy 5-6.1: The City will continue to maintain and develop a set of strong local ordinances to benefit the quality of living in residential areas and promote high standards of aesthetics.

Policy 5-6.2: The City will prohibit or restrict, as appropriate, residential development within or in proximity to airport flight patterns, freeways, railroads, industrial areas, areas subject to flooding or geologic hazards, or any other areas determined to be incompatible or inharmonious.

Policy 5-6.3: The City will encourage the design of residential developments that are buffered from nearby commercial and industrial areas, freeways, and railroads and avoid fronting on major (primary and secondary) streets.

Policy 5-6.4: The City will require residential developments to respect the natural topography by avoiding excessive grading and promoting planned or clustered developments in hillside and other areas containing sensitive physical and biological features and open spaces worthy of preservation.

Policy 5-6.5: The City will encourage residential developments that form neighborhood units with both natural (streams, ridgelines, etc.) and man-made (major streets, etc.) boundaries and focus on schools, parks, and other activity centers in order to create neighborhood focal points and foster social interaction within the neighborhood.

Goal 8: The livability of El Cajon will be maintained and enhanced through respect for the environment.

Objective 8-1: The development of property shall be coordinated with efforts at conservation of natural resources.

Policy 8-1.1: All development proposals shall receive the judicious and rational use of environmental review procedures.

Objective 8-2: Ensure that the physical environment of the El Cajon area is protected from adverse impact.

Policy 8-2.1: The retention of the unique natural features of a development site, such as rock outcroppings, native vegetation, and trees, shall be encouraged.

Policy 8-2.2: The flat, valley portions of El Cajon shall receive the most intensive development. Hillside areas shall receive less intensive development. Steep hillside areas (slopes more than 25%) shall be placed in the open space land use category.

Policy 8-2.3: All graded slopes shall be adequately planted for erosion control.

Policy 8-2.4: Special design standards shall be considered for local residential service roads in hillside areas.

Objective 8-4: Encourage future land use planning and development that take into consideration the effects of noise upon the environment.

Objective 8-5: Achieve an urban form that respects the natural land forms of the area and preserves the unique contrast between the valley's level floor and the surrounding hills.

Policy 8-5.1: Planned residential developments shall be recommended for proposed projects on hillside property.

Policy 8-5.2: Excessive amounts of grading with enormous and unsightly banks shall be controlled by application of the Hillside Overlay Zone to hillside property.

Policy 8-5.3: Hillside property retained in its natural state and used for passive public recreational purposes (hiking, picnicking, etc.) shall be considered for public acquisition.

Policy 8-5.4: The Hillside Overlay Zone shall be reviewed regarding its standards.

Objective 8-6: Promote urban development characterized by the balanced coexistence of people, wildlife, and vegetation.

Objective 8-10: Achieve and maintain a level of water quality that protects affected watersheds by minimizing runoff, which may cause erosion and pollution.

Policy 8-10.1: The City shall minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment. Where feasible, the City will insure that new development or redevelopment slows runoff and maximizes on-site infiltration of runoff.

Policy 8-10.9: Post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives or have not been reduced to the maximum extent practicable.

Goal 16: El Cajon shall take positive steps to minimize risks to life and property resulting from disasters.

Policy: 16-1.6: Soils reports shall be required for all new construction.

Policy: 16-1.7: The City shall approve only those land uses that are consistent with the Gillespie Field Land Use Plan developed by SANDAG.

City of El Cajon Zoning Code

The City of El Cajon Zoning Code is intended to carry out the goals and policies of the City of El Cajon General Plan. As shown in Figure 3-3, the north parcel is zoned RS-20, which is intended for single-family residential development at a maximum density of one unit per a 20,000-square-foot lot. Pursuant to Section 17.140.030 of the City's Municipal Code, development standards for residential zones are intended to achieve General Plan goals and objectives by regulating residential development within specific density ranges. The south parcel is zoned RS-20-H, which is single-family residential development at a maximum density of one unit per a 20,000-square-foot lot plus the Hillside Overlay Zone. Pursuant to Section 17.170.040 of the City's Municipal Code, the Hillside Overlay Zone provides for reasonable use of hillside areas, recognizing that hillsides do not lend themselves to the same development standards as predominantly level lands.

Impact Analysis

Would the project:

a. Physically divide an established community?

No Impact. The proposed project would include an amendment to the General Plan to change the land use designation of the north parcel to Low-Low Density Residential, which would allow zero to three dwelling units per net acre. The proposed project would be generally consistent with surrounding land uses, which include Low-Low Density Residential and Parochial School. The proposed project would not include any changes to surrounding land uses or potential barriers that would divide the existing community. Therefore, impacts would not occur.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less-than-Significant Impact. The proposed project was reviewed for consistency with policies in the City of El Cajon General Plan. The proposed project could result in conflicts with the following policies:

> **Policy 5-6.3:** The City will encourage residential developments that are buffered from nearby commercial and industrial areas, freeways, and railroads and designed to avoid fronting on major (primary and secondary) streets.
>
> **Policy 5-6.4:** The City will require residential developments to respect the natural topography by avoiding excessive grading and promoting planned or clustered developments in hillside and other areas containing sensitive physical and biological features and open spaces worthy of preservation.
>
> **Policy 8-2.2:** The flat valley portions of El Cajon shall receive the most intensive development. Hillside areas shall receive less intensive development. Steep hillside areas (slopes more than 25 percent) shall be placed in the open space land use category.
>
> **Policy 8-2.3:** All graded slopes shall be adequately planted for erosion control.
>
> **Policy 8-5.2:** Excessive amounts of grading with enormous and unsightly banks shall be controlled by application of the Hillside Overlay Zone to hillside property.
>
> **Policy 8-10.1:** The City shall minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment. Where feasible, the City will ensure that new development or redevelopment slows runoff and maximizes on-site infiltration of runoff.
>
> **Policy 8-10.9:** Post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives or have not been reduced to the maximum extent practicable.

The project site is within the Parochial School and Low-Low Density Residential designations of the El Cajon General Plan and RS-20 and RS-20-H zones. The proposed project would include a General Plan amendment to change the General Plan land use designation to Low-Low Density Residential for the north parcel and change the zoning to RS-14 for both the north and south parcels (Figure 3-3). RS-14 is intended to limit residential development to a maximum density of one unit per 14,000-

square-foot lot. The project proposes 19 new units. The proposed project would not include construction of residential units; however it is reasonably foreseeable the construction of residential units would occur in the future.

The south parcel is located within a hillside overlay zone and development of the parcels would comply with the established development standards. Retaining walls will be constructed on Lots 4 and 7 through 10 that range in height from 2 to 5 feet. Additionally, the proposed project would include an amendment to Specific Plan 523 to remove the north and south parcels from the Specific Plan. Therefore, the proposed project would not conflict with the goals of the Specific Plan.

Based on the analysis found in Section IV, *Biological Resources,* the project site does not contain sensitive vegetation or suitable habitat for special-status plant or wildlife species. Therefore, the proposed project would not be developed on sensitive biological features. The construction of future residences would be likely to include grading; however, grading in the areas designated as the hillside overlay zone would comply with the applicable goals and requirements established by the City for this zone.

The future development of residential units would include additional impervious surfaces. The future development would prepare a SWPPP, which would include project-specific BMPs to decrease runoff originating from the project site and improve runoff water quality. Therefore, with the proposed change to the land use designation and zoning for the project site, as well as the aforementioned project features, the proposed project would be consistent with local land use plans and policies, including all of the policies listed under the Regulatory Setting, above. The impact would be less than significant.

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Figure 3-3
Proposed Land Use and Zoning
Madison Avenue Residential Project

XII. Mineral Resources	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	☒

Environmental Setting

The Surface Mining and Reclamation Act of 1975 requires the State Geologist to initiate mineral land classification to help identify and protect mineral resources in the state. In accordance with guidelines established by the State Mining and Geology Board, mineral deposits in western San Diego County have been classified as Mineral Resource Zones (MRZs). San Diego's principal mineral resources are salt, sand, and gravel, all of which have been produced in San Diego for decades. The project site and surrounding area are in MRZ-3, as mapped by the California Department of Conservation (City of San Diego 2008). The MRZ-3 designation identifies areas that contain mineral deposits, but the significance cannot be determined from available data.

Regulatory Setting

In 1975, the California Geological Survey created a program to help with the protection and development of mineral resources through the land use planning process. This program is mandated by the Surface Mining and Reclamation Act, which requires the State Mining and Geology Board to map areas throughout the state that contain regionally significant mineral resources. Aggregate mineral resources within the state are classified by the board through application of the MRZ system, which is used to map mineral commodities within identified jurisdictional boundaries. The MRZ system classifies lands that contain mineral deposits and identifies the presence or absence of substantial sand and gravel deposits as well as crushed rock areas (i.e., commodities that are used as, or in the production of, construction materials). The State Geologist classifies MRZs within a region according to the following:

- **MRZ-1:** Areas where adequate information is available to indicate that no significant mineral deposits are present or little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information is available to indicate that significant mineral deposits are present or a high likelihood exists for their presence.
- **MRZ-3:** Areas that contain mineral deposits, but the significance cannot be determined from available data.
- **MRZ-4:** Areas where the available information is inadequate for assignment to any other MRZ category.

The project site is classified MRZ-3 (City of San Diego 2008), indicating that the project site is in an area where the significance of mineral deposits cannot be determined from the available data. There are no know mineral resources of significant value in the City of El Cajon.

Impact Analysis

Would the project:

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?

No Impact. No mineral extraction or other mining operations occur on the project site or in the immediate vicinity. There are no know mineral resources of significant value on the project site or in the City. No impact on mineral resources would occur.

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?

No Impact. There are currently no mineral extraction activities at the project site. Furthermore, the site would not be available for such activities in the future. Therefore, implementation of the proposed project would not result in the loss of availability of a locally important mineral resource recovery site, and no impact would occur.

XIII. Noise	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☐	☒	☐	☐
b. Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☒	☐	☐
c. Be located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

The project site is located along the northern and southern sides of Madison Avenue, which is a source of traffic noise at the project site. Other sources of ambient noise at the project site include single-family residences, SMCC, the SMCC seminary, and parochial school facilities. The existing noise-sensitive receivers in the vicinity of the proposed project consist of single-family homes and parochial schools. The north parcel would be immediately adjacent to residences to the east, west, and north as well as residences on East Madison Avenue to the south. The south parcel would be immediately adjacent to residences to the west and south, Southern California Seminary to the east, and East Madison Avenue to the north.

Regulatory Setting

State

California requires each local government entity to perform noise studies and implement a noise element as part of its general plan. The purpose of the noise element is to limit the exposure of the community to excessive noise levels; the noise element must be used to guide decisions concerning land use. The City of El Cajon General Plan is discussed below.

California Department of Transportation

Caltrans provides widely referenced vibration guidelines in its publication *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013). Although these guidelines do not represent strict standards that apply to the proposed project, they are useful in assessing ground-borne vibration levels generated by project construction, particularly because the City of El Cajon does not

provide any quantitative vibration standards. The manual provides guideline criteria for potential building damage from ground-borne vibration, as summarized in Table 3-6, below. The vibration metric used in the table is peak particle velocity (PPV),[6] measured in inches per second (in/s). Typical construction equipment would be categorized as "continuous/frequent intermittent" vibration sources.

Table 3-6. Caltrans Vibration Damage Potential Threshold Criteria

	Maximum PPV (in/s)	
Structure and Condition	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes: Transient sources, such as blasting or drop balls, create a single isolated vibration event. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

The manual also indicates that, for continuous/frequent intermittent vibration sources, the human response to ground-borne vibration varies from barely perceptible at 0.01 in/s PPV to distinctly perceptible at 0.04 in/s PPV, strongly perceptible at 0.10, and severe at 0.4 in/s PPV.

Local

City of El Cajon Municipal Code

Section 17.115.130 of the City of El Cajon Municipal Code provides the City's Noise Ordinance. The noise ordinance is intended to protect sensitive land uses from stationary (i.e., non-transportation) noise sources such as commercial and industrial activities, music, and mechanical equipment (City of El Cajon 2011). The City sets limits on the level of noise that may affect residential properties, as summarized in Table 3-7. As shown in the table, the ordinance provides stricter noise limits at night to reflect the fact that people are typically more sensitive to noise during nighttime hours.

Referring to Section 17.115.130 of the City of El Cajon Municipal Code, operation of construction equipment is not permitted between the hours of 7 p.m. of one day and 7 a.m. the next day.

Table 3-7. City of El Cajon Noise Ordinance Standards at Residentially Zoned Properties

Time Period	One-Hour Average Sound Level (decibels)
7 a.m.–7 p.m.	60
7 p.m.–10 p.m.	55
10 p.m.–7 a.m.	50

[6] The maximum instantaneous positive or negative peak amplitude of the vibration velocity.

Ground-borne vibration is discussed in Section 17.115.130 of the City Municipal Code, which states that

> Every use shall be so operated that the ground vibration generated by such use is not harmful or injurious to the use or development of surrounding properties. No vibration shall be permitted that is perceptible without instruments at any use along the property line on which such use is located. For the purpose of this determination, the boundary of any lease agreement or operating unit or properties operating as a unit shall be considered the same as the property line.

City of El Cajon General Plan

The City of El Cajon General Plan includes goals and policies to shape future development in the City. The following objectives and policies apply to the proposed project:

Objective 8-3: Reduce levels of noise so they do not adversely affect the physiological, psychological, or sociological well being of the citizens of El Cajon.

Policy 8-3.2: Noise-attenuating measures, such as special building insulation, increased setbacks, walls, landscaping, etc., shall be required whenever any residential noise-sensitive land uses are proposed in the noise impact area of a major transportation facility, as indicated on the noise contour map on file in the office of the Department of Community Development.

Policy 8-3.8: In order to minimize noise impacts from noise sources, the City may require site design considerations, such as increased setbacks, sound attenuating walls, and landscaping, and may also require building design considerations, such as type of construction, insulation, and orientation of building openings.

Objective 8-4: Encourage future land use planning and development that take into consideration the effects of noise upon the environment.

Impact Analysis

Would the project:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less-than-Significant Impact with Mitigation Incorporated: Noise generated by project construction and operation could result in impacts on nearby receptors. These impacts are described below, along with the recommended mitigation measures.

Construction

Two types of short-term noise impacts could occur during construction of the proposed project. First, construction workers who would commute to the site and trucks that would transport equipment and materials would incrementally increase noise levels on access roads. Although there would be a relatively high single-event noise level, which could cause an intermittent noise nuisance (e.g., passing trucks at 50 feet would generate up to 76 A-weighted decibels), the contribution of construction traffic to ambient noise levels (such as the daily Community Noise Equivalent Level)

would be low because of the infrequent traffic. Therefore, short-term construction-related impacts associated with commuting workers and transporting equipment to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during demolition, site preparation, grading, building construction, paving, and architectural coating at the project site. Construction-related noise levels would typically be higher than existing ambient noise levels in the project area but would cease once construction of the project is completed.

Construction activity at the project site would be limited to the hours permitted by the City's Municipal Code. Any construction noise that occurs outside of those hours could cause a significant impact. Therefore, mitigation measure **MM-NOI-1** is provided to limit noise-generating construction activity to the permitted daytime hours and incorporate standard noise-reduction methods to minimize potential annoyance at nearby noise-sensitive receptors. With implementation of mitigation measure **MM-NOI-1**, impacts would be less than significant.

MM-NOI-1: The developer will submit a noise control plan prior to issuance of the building permit in order to limit construction hours and employ noise-reducing construction practices. The following noise control measures would be incorporated into the project contract specifications in order to minimize construction noise effects:

- Construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. on weekdays and Saturdays and shall not occur at any time on Sundays or federal holidays. Construction personnel shall not be permitted on the job site and material or equipment deliveries and collections shall not be permitted outside of these hours.
- All construction equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications.
- All mobile or fixed construction equipment used on the project that is regulated for noise output by a local, state, or federal agency shall comply with such regulations while in the course of project activity.
- All construction equipment shall be properly maintained. (Poor maintenance of equipment may cause excessive noise levels.)
- All construction equipment shall be operated only when necessary and shall be switched off when not in use.
- Construction employees shall be trained in the proper operation and use of the equipment. (Careless or improper operation or inappropriate use of equipment can increase noise levels. Poor loading, unloading, excavation, and hauling techniques are examples of how a lack of adequate guidance and training may lead to increased noise levels.)
- Electrically powered equipment shall be used instead of pneumatic or internal combustion–powered equipment, where feasible.
- Stationary equipment, such as generators or compressors, shall be located as far as feasible from noise-sensitive receptors.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.

- Construction site and access road speed limits shall be established and enforced during the construction period.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- The project developer and/or its contractor shall prominently post signage at the west end of the project site not less than 72 hours prior to the start of any construction activity using heavy construction equipment (graders, dozer, backhoes, etc.). This signage shall be clearly visible from outside the project site and shall provide the project name, indicate the anticipated dates of construction, and advise that there will be loud noise associated with some construction activities. The signage shall provide a telephone contact number for affected parties to ask questions and/or relay concerns. This signage may consist of a stand-alone sign or may be combined with any other project-related signage at the project boundary. The project developer shall include this measure in the construction specification documents for the project. Prior to the commencement of heavy construction activities, the project developer and/or its contractor shall submit documentation (including photographs) to the City demonstrating compliance with this measure.

Off-site Traffic Noise Impacts

Implementation of the proposed project would result in a permanent increase in traffic volumes on roadways in the vicinity. According to the Focused Traffic Analysis conducted by Darnell & Associates, the proposed project would generate 230 daily trips, 19 AM peak-hour trips and 23 PM peak-hour trips (see Section XVI, *Transportation/Traffic*, for further discussion of traffic impacts). The amount of traffic generated by the proposed project would not be considered significant compared with traffic under existing conditions in the project vicinity. The primary noise-sensitive receptors that could be affected by noise from project-related traffic are residences along the affected roadways. The small amount of traffic generated by the project would not be likely to increase traffic noise levels a significant amount along the affected roadways. Therefore, the off-site traffic noise impacts would be less than significant.

Stationary Noise Sources

Because the project proposes development of residential land uses, it would not include any substantial on-site (i.e., stationary) noise sources. Any mechanical equipment, such as heating, ventilation, and air conditioning equipment or swimming pool pumps and heaters, would be similar to equipment at the existing homes in the project vicinity and would be required to comply with the City's Noise Ordinance at the time of installation. Therefore, noise impacts from on-site operational noise sources would be less than significant.

b. Generation of excessive ground-borne vibration or ground-borne noise levels?

Less-than-Significant Impact with Mitigation Incorporated. The proposed project is a residential use and not anticipated to include any operations that would generate perceptible ground-borne vibration. During construction activities, ground-borne vibration would, at times, be perceptible at nearby sensitive receptors but would be below applicable criteria for potential building damage. Implementation of **MM-NOI-1** would limit all on-site construction activities to daytime hours, as permitted by the City's Municipal Code. Thus, the impact would be less than significant.

c. Be located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?

No Impact. The closest public airport to the project site is Gillespie Field, approximately 3.75 miles to the northwest. The project site does not fall within the noise exposure contours for Gillespie Field. Therefore, there would be no impact.

XIV. Population and Housing	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace a substantial number of existing people or housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Setting

The proposed project would be located in the City of El Cajon, which has an estimated population of 102,803 (California Department of Finance 2017a). The average household size in El Cajon as of January 1, 2017, was 2.92 persons per household, and the total number of housing units was 36,046 (California Department of Finance 2017b).

Impact Analysis

Would the project:

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

Less-than-Significant Impact. The proposed development would be located in an urbanized, residential area. The proposed project, a low-density residential subdivision, would help the City of El Cajon meet its Regional Housing Needs Assessment. The project site has roadway access from Madison Avenue as well as utility connections. It would extend the sewer and water lines from the existing lines to the subdivided lots, but would not require the extension of infrastructure that would allow for additional development. Furthermore, the surrounding area is already built out, and the project would not induce substantial growth. The proposed project would generate approximately 55 residents (19 units x 2.92 persons per household), which would not be considered substantial. Therefore, the project would not induce substantial unplanned population growth and impacts would be less than significant.

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

No Impact. The proposed project would not displace any people and would not necessitate the construction of replacement housing. One single-family residence is located at 2000 East Madison

Avenue. The proposed subdivision would keep the existing residence in place. No impact would occur involving displacement of people.

XV. Public Services	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:				
1. Fire protection?	☐	☐	☒	☐
2. Police protection?	☐	☐	☒	☐
3. Schools?	☐	☐	☒	☐
4. Parks?	☐	☐	☒	☐
5. Other public facilities?	☐	☐	☒	☐

Environmental Setting

Fire Protection Services

Heartland Fire & Rescue provides fire protection services to the City of El Cajon as well as the cities of La Mesa and Lemon Grove under a joint exercise of powers agreement (Heartland Fire & Rescue 2017). Heartland Fire & Rescue operates eight fire stations, employees more than 130 personnel, and serves a population of more than 186,000 people. Four fire stations are located in El Cajon. The closest Heartland fire station is Station 8, at 1470 East Madison Avenue, approximately 1.20 miles west of the project site.

Police Services

Police services in the project area are provided by the El Cajon Police Department, the duties of which include providing patrol, traffic enforcement, and animal control services; maintaining records; conducting investigations; training reserve officers; and overseeing various volunteer groups (El Cajon Police Department 2017). Headquarters is at 100 Civic Center Way, approximately 3 miles west of the project site.

Public Schools

Cajon Valley Union School District provides elementary and middle public school services to the residents of El Cajon. The district covers 66.3 square miles and serves approximately 8,800 students, from kindergarten to eighth grade (Cajon Valley Union School District 2017). The Grossmont Union High School District operates public high schools in the City of El Cajon. The project site would be

within the attendance boundaries of Granite Hills High School, Montgomery Middle School, and Madison Elementary School. Granite Hills High School is at 1719 East Madison Avenue, approximately 0.20 mile west of the project site. Granite Hills High School had an enrollment of 2,337 ninth- through twelfth-grade students in the 2016–2017 school year (California Department of Education 2017a). Montgomery Middle School is at 1570 Melody Lane, approximately 0.81 mile west of the project site. The school's current capacity would accommodate 1,031 students (Ayon pers. comm.). Montgomery Middle School served a total of 828 students in sixth through eighth grades during the 2016–2017 school year (California Department of Education 2017b). Madison Elementary School is at 1615 East Madison Avenue, approximately 0.82 mile west of the project site. The school's current capacity would accommodate 618 students (Ayon pers. comm.). Madison Elementary had an enrollment of 635 kindergarten through fifth-grade students during the 2016–2017 school year (California Department of Education 2017c).

Parks

The City of El Cajon Recreation Department operates 17 parks and recreational facilities. The department's administration office is at 200 Civic Center Way. The closest parks to the project site are at the Granite Hills High School facility, at 1719 East Madison Avenue, approximately 0.20 mile west of the project site, and Kennedy Park and Skate Park, at 1675 East Madison Avenue, approximately 0.64 mile west of the project site.

Other Facilities

The San Diego County Library, El Cajon Regional Branch, is approximately 3 miles west of the project site. Sharp Grossmont Hospital is approximately 5.85 miles west of the project site.

Regulatory Setting

There are no public service regulations that apply to the project site.

Impact Analysis

Would the project result in substantial adverse physical impacts associated with:

a1. Fire protection?

Less-than-Significant Impact. During construction of the proposed project, fire protection services could be required; however, this phase of the project would be temporary and short term in nature. In addition, fire protection services are already available in the project area. Operation of the proposed project would lead to an increased demand for fire protection services by increasing the size of the permanent population. Given the City's estimated population of approximately 102,803, the proposed project would represent a population increase of less than 0.01 percent. Therefore, the proposed project would not be expected to result in an additional strain on fire protection services such that new or expanded facilities would be required. Therefore, impacts are expected to be less than significant.

a2. Police protection?

Less-than-Significant Impact. Operation of the proposed project would lead to an increased demand for police protection services. However, given the City's estimated population of

approximately 102,803, the proposed project would represent a population increase of less than 0.01 percent. Therefore, the proposed project would not be expected to result in an additional strain on police protection services such that new or expanded facilities would be required. Therefore, impacts would be less than significant.

a3. Schools?

Less-than-Significant Impact. The proposed project would involve subdivision of two parcels into 19 lots for development of single-family residences. As mentioned above, the proposed project would be served by Madison Elementary School and Montgomery Middle School within the Cajon Valley Union School District and Granite Hills High School within the Grossmont Union High School District. Pursuant to Government Code Section 65995 et seq., the project applicant would pay for all applicable school fees and building permits. Payment of such fees would avoid significant impacts on schools, such as overcrowding classrooms. No physical impacts on school facilities would occur as a result of project implementation. It is anticipated that the schools in the project vicinity would have capacity to serve the students that would be generated by the proposed project. Therefore, the proposed project would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools. The impacts related to school services would be less than significant.

a4. Parks?

Less-than-Significant Impact. The proposed project would accommodate up to 55 new residents; therefore, it would increase the use of nearby park facilities. However, given the City's existing population of approximately 102,803, the additional 55 persons would represent less than a 0.01 percent increase in population compared with existing conditions, which would not be considered substantial. Therefore, existing park facilities would be able to serve the new residents, and new or expanded facilities would not be required as a result of the project. Impacts related to park facilities would be less than significant.

a5. Other public facilities?

Less-than-Significant Impact. Implementation of the proposed project would involve the subdivision of the project site into 19 lots for future development of single-family residences, which would accommodate up to 55 residents. However, given the City's existing population of approximately 102,803, the additional 55 persons would represent less than a 0.01 percent increase in population compared with existing conditions, which would not be considered substantial. Although the proposed project would create a small additional demand for library services and medical services in the City, this increase would not be substantial. New or expanded facilities would not be required as a result of the project. Therefore, impacts related to other public facilities would be less than significant.

XVI. Recreation	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental Setting

The City of El Cajon Recreation Department operates 17 parks and recreational facilities. The department's administration office is at 200 Civic Center Way. The closest parks to the project site are the Granite Hills High School facility, at 1719 East Madison Avenue, approximately 0.20 mile west of the project site, and Kennedy Park and Skate Park, at 1675 East Madison Avenue, approximately 0.64 mile west of the project site (City of El Cajon 2017).

Regulatory Setting

State

Quimby Act

The 1975 Quimby Act (California Government Code Section 66477) was passed to require developers to help mitigate the impacts of property improvements. The Quimby Act authorizes local governments to pass ordinances that require developers to set aside land, donate conservation easements, or pay in-lieu fees for park improvements. The in-lieu fees must be paid and/or the land must be conveyed directly to the local public agencies that provide the community-wide park and recreation services (California Department of Parks and Recreation 2002).

Local

City of El Cajon General Plan

The City of El Cajon General Plan Open Space and Parks Element provides a framework for the maintenance of existing recreational facilities and the development of future facilities. The Open Space and Parks Element identifies the City's priorities of developing recreational facilities and preserving open space and hillsides for recreational uses.

Impact Analysis

Would the project:

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

b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Less-than-Significant Impact. The proposed project would subdivide the existing property into 19 lots for future development of single-family units, which would accommodate approximately 55 residents. This increase in the number of residents in the area would increase the use of regional parks and recreational facilities. However, given the City's existing population of approximately 102,803, the additional 55 persons would represent less than a 0.01 percent increase in population compared with existing conditions, which would not be considered substantial. Therefore, the existing park facilities would be able to serve the new residents. New or expanded facilities would not be required as a result of the project. The impacts related to recreational facilities would be less than significant.

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

Environmental Setting

The traffic and transportation information contained herein is based on the October 17, 2018, *Revised Focused Traffic Analysis for the 23 Lot Subdivisions for 2000 and 2075 East Madison Avenue, El Cajon California* from Darnell & Associates, Inc. (Darnell) (Appendix D).

Regional access to the project site is provided by I-8, at Main Street, and SR-17 (North 2nd Street), at East Madison Avenue. The study area for traffic and transportation includes Madison Avenue west of Greenfield Drive and Greenfield Drive north and south of Madison Avenue. AM and PM operations at the Madison Avenue/Greenfield Drive intersection were also analyzed.

The San Diego Metropolitan Transit System provides service to the study area by way of bus and trolley routes. San Diego Metropolitan Transit System provides bus service along East Madison Avenue, approximately 0.58 mile from the project site. The El Cajon Transit Center, approximately 4 miles from the project site, is the transportation hub for El Cajon, serving as a stop for several bus routes and two trolley routes that connect the City to the rest of the region. Bicycle lanes are located in the project vicinity.

Baseline traffic counts and roadway conditions were determined by Darnell, which conducted a field review of the project vicinity in May 2017. Darnell found that Greenfield Drive south of East Madison Avenue is classified as a two-lane collector street with a painted median; it is currently operating at a level of service (LOS) B. Greenfield Drive north of East Madison Avenue is classified as a two-lane undivided secondary thoroughfare; it is currently operating at LOS E. Madison Avenue east of Granite Hills and west of Greenfield Drive is classified as a two-lane undivided secondary thoroughfare; it operates at LOS C.

Intersections were also evaluated for baseline conditions. According to the data collected by Darnell, the signalized intersection of Greenfield Drive and Madison Avenue operates at a LOS C during both AM and PM peak-hour conditions.

Regulatory Setting

Level of Service

Traffic operations along roadway facilities are described in terms of LOS. LOS is a qualitative description of traffic flow and based on several factors, such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined, ranging from LOS A, representing completely free-flow conditions, to LOS F, representing a breakdown in flow and resulting in stop-and-go conditions. LOS E represents operations that are at or near capacity, an unstable level in which vehicles are operating with the minimum amount of spacing for maintaining uniform flow. The City of El Cajon has established LOS D as the minimum LOS for intersections. Therefore, any intersection that operates at LOS E or worse will be considered deficient for the purposes of this analysis.

Intersection Capacity Analysis

The definitions of LOS for interrupted traffic flow (i.e., flow that is restrained by traffic signals or other traffic control devices) differ slightly, depending on the type of traffic control. LOS is typically dependent on the quality of traffic flow at intersections along a roadway. The 2010 *Highway Capacity Manual* methodology expresses LOS at an intersection in terms of delay time for the various intersection approaches. The *Highway Capacity Manual* uses different procedures, depending on the type of intersection control. In comparison, the Intersection Capacity Utilization methodology expresses LOS at a signalized intersection in terms of the volume-to-capacity (v/c) ratio.

Impact Analysis

Would the project:

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 nonmotorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less-than-Significant Impact with Mitigation Incorporated. The proposed project includes subdividing the north and south parcels into 19 lots for the future development of residential units. Construction is not part of the proposed project; however, it is reasonably foreseeable that future development of the project site would require construction activities. A description of impacts related to assumed future construction and operation is provided below.

Construction

Construction activities are expected to generate a short-term temporary increase in construction-related traffic. Although specific construction-related traffic impacts are not quantified for the proposed project, potential morning and afternoon traffic delays related to construction vehicles could have a temporary short-term impact on roadways adjacent to the project site. As such, implementation of a construction traffic management plan, as described in mitigation measure **MM-TRA-1,** would reduce short-term construction traffic impacts to a less-than-significant level.

MM-TRA-1. Prior to initiating construction, the applicant will prepare a construction traffic management plan, which will be approved by the City Engineer. The traffic management plan will include, but will not be limited to, the following:

- A street and site layout showing the location of construction activity and surrounding streets that are to be used as detour routes, including special signage.
- A tentative start date and construction duration period for each phase of construction.
- The names, addresses, and emergency contact numbers for those responsible for maintaining the traffic control devices during the course of construction.
- Provisions for maintaining access for emergency vehicles at all times.
- Requirements for contractors to avoid intersections that currently operate under congested conditions, either by choosing routes that avoid these locations or by receiving deliveries during non-peak times of day.
- Provision of traffic controls within the site, which may include flag persons wearing Occupational Health and Safety Administration–approved vests and using a "Stop/Slow" paddle to warn motorists of construction activity.
- Standard construction warning signs in advance of the construction area and at any intersection that provides access to the construction area.

Operation

Trip generation represents the amount of traffic that is both attracted to and produced by a development. The trip generation potential for a project is based on land use characteristics. SANDAG published trip generation rates for common land uses in the San Diego region in its April 2002 *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (Appendix D). The trip generation rates used to estimate project traffic and a summary of the project's trip generation are provided in Appendix D. According to Darnell, the proposed project would generate an estimated 230 daily trips, including 19 AM peak-hour trips and 23 PM peak-hour trips.

Darnell's Revised Focused Traffic Study includes an analysis of potential operational impacts, which are based on existing conditions plus project conditions. The Revised Focused Traffic Study concluded that Madison Avenue as well as Greenfield Drive south of Madison Avenue would continue to operate at LOS C or better with the additional project traffic. Greenfield Drive north of Madison Avenue would continue to operate at LOS E with the addition of project traffic.

The City of El Cajon has established a 0.02 V/C ratio as the allowable increase on roadway segments due to project impacts. The proposed project would not result in a V/C ratio greater than 0.02. Therefore, the proposed project would not result in significant impacts on roadway LOS.

The Greenfield Drive/Madison Avenue intersection would continue to operate at LOS C or better. The proposed project would result in a new intersection at Madison Avenue and the project access points to the north and south parcels. The analysis of this intersection was based on the installation of stop-sign controls where project vehicles would enter Madison Avenue, as described in mitigation measure **MM-TRA-2**.

MM-TRA-2. Install stop-sign controls as part of the proposed project on the south parcel and the north parcel where traffic enters Madison Avenue.

With the incorporation of **MM-TRA-2**, the Madison Avenue/project access intersection would operate at LOS C or better. Therefore, the proposed project would not result in significant impacts on roadway or intersection LOS in the project vicinity.

Darnell evaluated potential project impacts on County of San Diego Circulation Element roadway segments, including Greenfield Drive north of Madison Avenue, based on *Measures of Significant Project Impacts to Congestion on Roadway Segments: Allowable Increases on Congested Road Segments* (Darnell & Associates 2017). The analysis concluded that Greenfield Drive north of Madison Avenue would continue to operate at LOS E, resulting in no increase in the existing plus project V/C ratio; therefore, the proposed project would not result in a significant impact.

With the incorporation of **MM-TRA-1** and **MM-TRA-2,** potentially significant impacts would be less than significant.

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?

No Impact. As evaluated by Darnell in the Revised Focused Traffic Study and discussed above, there would be no significant impacts on Greenfield Drive north of Madison Avenue, a County of San Diego Circulation Element roadway segment. Therefore, the proposed project would not result in any conflicts, and no impact would occur.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks?

No Impact. Gillespie Field is approximately 6 miles northwest of the project site. The project site is located within the FAA Height Notification Boundary for Gillespie Field. Therefore, the proposed project would notify the FAA if project elements were to exceed the height requirements. The project site does not fall within the Airport Review Area, Airport Overflight Notification Area, or any designated safety zones for Gillespie Field. Furthermore, the proposed project would involve development of single-family residences, which would not extend into airspace or be tall enough to result in a change in air traffic patterns or a change in location. Therefore, the proposed project would not result in a change in air traffic patterns or otherwise result in a safety risk, and impacts would not occur.

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

No Impact. According to the Revised Focused Traffic Study, no hazardous conditions have been identified under existing conditions, and none are proposed under the project. Therefore, no impacts would occur.

e. Result in inadequate emergency access?

No Impact. Emergency access to the project site would be provided by the proposed Street A and Street B off of Madison Avenue. The proposed project would provide adequate emergency access. Therefore, there would be no impact.

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

No Impact. Greenfield Drive contains a bicycle lane north and south of Madison Avenue. The additional traffic due to the proposed project would not affect LOS on Greenfield Drive, which would continue to operate at LOS C or better south of Madison Avenue and LOS E north of Madison Avenue. The proposed project would not affect existing sidewalks or the bus stop, which is approximately 0.5 mile from the project site. Therefore, the proposed project would not conflict with adopted policies or affect the performance or safety of existing public transit or pedestrian or bicycle facilities. Therefore, there would be no impact.

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

Regulatory Setting

AB 52 (Chapter 532, Statutes of 2014)

AB 52 (Chapter 532, Statutes of 2014) establishes a formal consultation process for California Native American tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts (PRC Section 21084.2). PRC Section 21074 defines tribal cultural resources as follows:

- Sites, features, places, sacred places, and objects with cultural value to descendant communities or cultural landscapes defined in size and scope that are included in or eligible for listing in the California Register of Historical Resources or included in a local register of historical resources.
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

Sacred places can include Native American sanctified cemeteries, places of worship, religious or ceremonial sites, and sacred shrines. In addition, both unique and non-unique archaeological resources, as defined in PRC Section 21083.2, can be tribal cultural resources if they meet the criteria detailed above. The lead agency relies upon substantial evidence to make the determination

that a resource qualifies as a tribal cultural resource when it is not already listed in the California Register of Historical Resources or a local register.

AB 52 defines a California Native American tribe as a Native American tribe located in California that is on the contact list maintained by the NAHC (PRC Section 21073). Under AB 52, formal consultation with tribes is required prior to determining the level of environmental document if a tribe has requested to be informed by the lead agency of proposed projects and if the tribe, upon receiving notice of the project, accepts the opportunity to consult within 30 days of receipt of the notice. AB 52 also requires that consultation, if initiated, address project alternatives and mitigation measures for significant effects, specifically if requested by the tribe. AB 52 states that consultation is considered concluded when either the parties agree to measures to mitigate or avoid a significant effect on tribal cultural resources or when either the tribe or the agency concludes that mutual agreement cannot be reached after making a reasonable good-faith effort. Under AB 52, any mitigation measures recommended by the agency or agreed upon with the tribe may be included in the final environmental document and the adopted mitigation monitoring program if they were determined to avoid or lessen a significant impact on a tribal cultural resource. If the recommended measures are not included in the final environmental document, then the lead agency must consider the four mitigation methods described in PRC Section 21084.3 (PRC 21082.3(e)). Any information submitted by a tribe during the consultation process is considered confidential and is not subject to public review or disclosure. It will be published in a confidential appendix to the Cultural and Paleontological Resources Inventory Report of this IS/MND unless the tribe consents to disclosure of all or some of the information to the public.

Impact Analysis

Would the project:

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

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

No Impact. As previously mentioned, an ICF archaeologist conducted a record search on June 26, 2017, at the SCIC. The records search identified 10 resources within 1 mile of the project area, but none are within the project area. No tribal cultural resources that are listed in or eligible for listing in the California Register of Historical Resources were identified during the records search. Additionally, a letter was sent to the NAHC on June 20, 2017, requesting a Sacred Lands File search and list of potentially interested Native American groups and individuals. The NAHC responded on June 27, 2017, stating that a search of the Sacred Lands File revealed no sacred lands or traditional cultural properties in proximity to the project area. There would be no impact.

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

Less-than-Significant Impact with Mitigation Incorporated. Pursuant to PRC Section 21080.3.1 (AB 52), California Native American tribes that are traditionally and culturally affiliated with the project area can request notification of projects in their traditional cultural territory. Notification letters were sent by the City of El Cajon to three Native American tribes that requested notification on August 28, 2017. The City received a response from the Viejas Band of Kumeyaay Indians identifying the possibility for potentially significant tribal cultural resources at the project site. The City has replied to the tribe to determine if the tribe would be requesting further consultation. No further correspondence was received from the Viejas Band.

Due to the possibility of potentially significant tribal cultural resources, the proposed project would implement **MM-CR-2** (see Section V, *Cultural Resources*) during grading activities. **MM-CR-2** would require a Native American Monitor to be present during all grading activities at the project site, in order to minimize disturbance of tribal cultural resources. With the incorporation of **MM-CR-2,** potential impacts on tribal cultural resources would be less than significant.

XIX. Utilities and Service Systems	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new water, or wastewater treatment facilities or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Environmental Setting

The project site contains existing underground and above-ground utilities, including water, wastewater, natural gas, and electrical utilities, that serve existing residences.

Water

The project site currently receives municipal water from the Helix Water District, which serves the cities of La Mesa, Lemon Grove, and El Cajon as well as various unincorporated communities in San Diego County, an area of approximately 50 square miles (Helix Water District 2015). The service area covers approximately 268,000 residents and 55,600 water service connections. The Helix Water District is a member agency of the San Diego County Water Authority, which, in turn, is a member agency of the Metropolitan Water District of Southern California. The Helix Water District receives raw water from the San Diego County Water Authority through the State Water Project and from local sources. It also uses treated water from its own water treatment facility. The Helix Water District's 2015 Urban Water Management Plan Update provides projections for future water demand and supply within the service area. According to the 2010 Urban Water Management Plan, the projected water demand by 2035 would be 42,000 acre-feet per year. The Helix Water District

predicted that the planned water supply by 2035 would be approximately 42,024 acre-feet per year and indicated that it can meet projected demands for normal years as well as single dry years and multiple dry years through 2033 (Helix Water District 2015).

Wastewater

Wastewater and stormwater services are provided by the City of El Cajon (City of El Cajon 2017). The City receives information about water use from the Helix Water District. Sewer service involves transporting wastewater through the City's Metropolitan Wastewater Department's sewer system to the City's Point Loma treatment plant where it is treated and released offshore into the ocean. The average daily wastewater flow is approximately 8 million gallons (Helix Water District 2015).

Solid Waste

Waste Management of San Diego collects solid waste and provides recycling for the City of El Cajon. Non-recyclable solid waste is disposed of at the Sycamore Landfill, which has 603 acres and, as of December 2014, a remaining capacity of 39,608,998 cy (California Department of Resources Recycling and Recovery 2017).

Electricity and Natural Gas

Power is provided to the project site by San Diego Gas & Electric, which supplies power to 3.6 million people through 1.4 million electric meters in a 4,100-square-mile service area (San Diego Gas & Electric 2017).

Impact Analysis

Would the project:

a1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less-than-Significant Impact. The proposed project would involve subdividing two parcels into 19 lots for future development of single-family residences. The project site contains one residential unit, which will remain on the site. The additional residences that would result from the project would increase the demand for water and produce additional wastewater. However, the approximately 55 new residents, representing less than 0.01 percent of the population, would not have a significant impact on existing facilities. In addition, the Helix Water District expects to meet projected demand for normal years, single dry years, and multiple dry years through 2035. Therefore, impacts would be less than significant.

a2. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less-than-Significant Impact. The project site is graded but primarily vacant, except for one residence on the north parcel. The proposed project would increase the amount of impervious surfaces because of new residences and paved streets and sidewalks. Construction activities may result in additional stormwater runoff. However, construction would be temporary, and construction BMPs would be implemented. During operation, existing storm drains and site design

features, such as biotreatment areas, would be used. Therefore, the proposed project is not anticipated to require the construction of new stormwater drainage facilities or expansion of existing facilities. Impacts would be less than significant.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less-than-Significant Impact. The proposed project would develop fewer than 500 units and would not increase the number of Helix Water District service connections by 10 percent. Therefore, the proposed project would not be required (pursuant to SB 221, Written Verifications of Water Supply) to conduct a water supply assessment. The proposed project would result in an increase in water demand. However, the approximately 55 new residents, representing less than 0.01 percent of the population, would not generate a significant increase. The Helix Water District has indicated that it will meet demand during both normal and dry water years through the planning period, which extends to 2035. Therefore, impacts would be less than significant.

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

Less-than-Significant Impact. As discussed above, the City of El Cajon anticipates meeting projected demands for normal years, single dry years, and multiple dry years through the planning period, which extends to 2035. The proposed project would result in an increase in water demand. However, the approximately 55 new residents, representing less than 0.01 percent of the population, would not generate a significant increase. Therefore, impacts would be less than significant.

d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-than-Significant Impact. Solid waste service for the City of El Cajon is provided by Waste Management of San Diego, which disposes of non-recyclable solid waste generated by the City at the Sycamore Landfill. The City of El Cajon generates 4.96 pounds of solid waste per person per day. Services provided by Waste Management include providing mandatory three-cart collection services at all single-family residential properties. The three-cart collection requires residents to sort their solid waste into three categories: non-recyclable solid waste, recyclable material, and green waste. Impacts relative to the proposed project's solid waste disposal needs would be less than significant.

e. Comply with federal, state, and local statutes and regulations related to solid waste?

Less-than-Significant Impact. The proposed project would comply with the City's Source Reduction and Recycling Element, as required pursuant to the Integrated Waste Management Act, which mandated that all cities reduce waste disposal in landfills from generators within their borders. Impacts relative to the project's compliance with regulations related to solid waste would be less than significant.

XX. Wildfire	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope stability, or drainage changes?	☐	☐	☒	☐

Impact Analysis

Would the project:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. See the discussion of Item IXf, under Section IX, *Hazards and Hazardous Materials*. As discussed, the City of El Cajon has adopted the County of San Diego Multi-Jurisdictional Hazard Mitigation Plan. During construction and operation, the proposed project would comply with applicable measures in the plan as well as requirements of the Heartland Fire and Rescue Department and the City's General Plan. Evacuation instructions and routes are provided by the County of San Diego Emergency Operations Center (under the Emergency Management Division) and facilitated by the responding agencies, such as the Heartland Fire and Rescue Department and the El Cajon Police Department.

Construction activities associated with future development under the proposed project would be required to comply with requirements set forth by the County of San Diego Office of Emergency Services' Operational Area Emergency Plan, the El Cajon Police Department, and the Heartland Fire and Rescue Department. Compliance with the aforementioned programs, rules, and regulations for emergency response would reduce the potential impact on emergency response to a less-than-significant level.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less-than-Significant Impact. See Item IXg. As discussed, El Cajon is subject to both wildland and urban fires due to its climate, topography, and native vegetation. The drought characteristic of the region's Mediterranean climate and increasingly severe dry periods associated with climate change have resulted in large areas of dry native vegetation that provide fuel for wildland fires. State law requires that all local jurisdictions identify VHFHSZ within their areas of responsibility (California Government Code Sections 51175–51189). Inclusion within these zones is based on vegetation density, slope severity, and other relevant factors that contribute to fire severity.

The project site is not within a Very High Fire Hazard Severity Zone (Cal Fire 2009). The proposed project would involve the construction of new residential housing outside of the VHFASZ and therefore does not have the potential to exacerbate existing conditions that could expose people or structures to a significant new risk of loss, injury, or death from wildfires within the City. Therefore, less than significant impacts would occur.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less-than-Significant Impact. Since the proposed project is not located in the VHFHSZ, the proposed project would not result in temporary or ongoing impacts on the environment, and, therefore, less than significant impacts would occur.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope stability, or drainage changes?

Less-than-Significant Impact. The proposed project would not expose people or structures to significant risks related to downstream flooding, runoff, post-fire stability, or drainage changes. Impacts would be less than significant.

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

Impact Analysis

Would the project:

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

Less-than-Significant Impact with Mitigation Incorporated. As discussed in Section IV, *Biological Resources*, no special-status plant or wildlife species are expected to occur within the project area. The potential exists for impacts on migratory birds that are protected under the MBTA if construction were to occur during the nesting bird season. However, with implementation of **MM-BIO-1**, this impact would be reduced to less-than-significant levels. As discussed in Sections V, *Cultural Resources*; VI, *Geology and Soils*; and XVII, *Tribal Cultural Resources*, the proposed project would not eliminate important examples of major periods of California history or prehistory. The project area has been significantly disturbed from previous grading and development. However, it is possible that archaeological resources could be encountered during construction of the proposed project. The destruction of any previously undiscovered historic archaeological resources would be

considered significant. To reduce potential impacts on potentially significant archaeological resources, mitigation measures **MM-CR-1** and **MM-CR-2** would be implemented.

Implementation of the proposed project would not result in substantial degradation of the quality of the environment, and potential impacts associated with construction of the proposed project would not substantially affect the habitat of a wildlife species, cause a species to drop below self-sustaining levels, threaten to eliminate a plant or animal community, affect a rare or endangered species, 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.)

Less-than-Significant Impact with Mitigation Incorporated. A cumulative impact could occur if the project would result in an incrementally considerable contribution to a significant cumulative impact identified from past, present, and reasonably foreseeable future projects for each resource area. Past projects have occurred and represent the existing condition. Present projects are currently under construction. Future projects have development applications in the process or approved, but no physical construction has yet occurred. As of August 2017, the City of El Cajon has listed 28 present and future projects within the City boundaries. When considered together, the project's incremental contribution to the less-than-significant impacts would not be cumulatively considerable. The project would not result in any significant impacts related to agricultural resources, land use/planning, or mineral resources and would not have any potential to contribute to a significant impact on any resource area. Less-than-significant impacts related to aesthetics, air quality, biological resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, population and housing, public services, recreation, transportation and traffic, and utilities and service systems would not add appreciably to impacts of any existing or foreseeable future projects that could result in a significant cumulative impact. Incremental impacts, if any, would be negligible and undetectable. Therefore, the proposed project, when combined with future projects, would not result in impacts that would be individually limited but cumulatively considerable. Consequently, impacts would be less than significant with mitigation incorporated.

c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

Less-than-Significant Impact with Mitigation Incorporated. As demonstrated in the analysis in this document, the proposed project would not have any substantial adverse effects on the environment, including human beings, either directly or indirectly. Although there are potentially significant impacts, mitigation measures would be required to reduce these impacts to less-than-significant levels. Furthermore, there would be no cumulative impacts associated with the project. As such, the effects on human beings as a result of the proposed project would be less than significant with mitigation incorporated.

Chapter 4
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Chapter 5
List of Preparers

City of El Cajon

Anthony Shute, AICP	Director
Melissa Devine, AICP	Planning Manager

ICF

Mary Bilse	Project Manager
Emily Seklecki	Environmental Planner
Karen Crawford	Senior Archaeologist
Karolina Chmiel	Archaeologist
Rachel Droessler	Archaeologist
Nara Cox	Archaeologist
Matt McFalls	Air Quality and Greenhouse Gas Specialist
Darrin Trageser	Air Quality and Greenhouse Gas Specialist
Courtney Casey	Wildlife Biologist
Lance Woolley	Botanist
Makela Mangrich	Senior Associate Biologist
Nicholas Janssen	GIS Specialist
Elizabeth Irvin	Technical Editor
Ken Cherry	Technical Editor

Polaris Development Consultants, Inc.

Joel Waymire	Principal

Shadow Mountain Community Church

Bryan Snow	Executive Pastor
Trev Holman	Operations Assistant

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Appendix A

Air Quality and Greenhouse Gas

Shadow Mountain Residences

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	23.00	Dwelling Unit	8.06	41,400.00	66

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot Acreage from PD.

Construction Phase - No Demolition or Grading phases per Mary Bilse email 7/24/17.

Vehicle Trips - Daily trip generation rates from the Traffic Analysis 6-14-17

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	11/22/2019	8/30/2019
tblConstructionPhase	PhaseEndDate	9/27/2019	8/2/2019
tblConstructionPhase	PhaseEndDate	10/25/2019	8/30/2019
tblConstructionPhase	PhaseEndDate	10/12/2018	9/14/2018
tblConstructionPhase	PhaseStartDate	10/26/2019	8/3/2019
tblConstructionPhase	PhaseStartDate	11/10/2018	9/15/2018

tblConstructionPhase	PhaseStartDate	9/28/2019	8/3/2019
tblConstructionPhase	PhaseStartDate	9/29/2018	9/1/2018
tblLandUse	LotAcreage	7.47	8.06
tblProjectCharacteristics	OperationalYear	2018	2020
tblVehicleTrips	ST_TR	9.91	10.00
tblVehicleTrips	SU_TR	8.62	10.00
tblVehicleTrips	WD_TR	9.52	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6393	48.2539	23.0925	0.0397	18.2141	2.5780	20.7921	9.9699	2.3717	12.3416	0.0000	3,993.1243	3,993.1243	1.1984	0.0000	4,023.0834
2019	66.5502	21.3487	17.4753	0.0282	0.1397	1.2921	1.3713	0.0370	1.2148	1.2361	0.0000	2,720.3995	2,720.3995	0.7426	0.0000	2,736.3526
Maximum	**66.5502**	**48.2539**	**23.0925**	**0.0397**	**18.2141**	**2.5780**	**20.7921**	**9.9699**	**2.3717**	**12.3416**	**0.0000**	**3,993.1243**	**3,993.1243**	**1.1984**	**0.0000**	**4,023.0834**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6393	48.2539	23.0925	0.0397	18.2141	2.5780	20.7921	9.9699	2.3717	12.3416	0.0000	3,993.1243	3,993.1243	1.1984	0.0000	4,023.0834
2019	66.5502	21.3487	17.4753	0.0282	0.1397	1.2921	1.3713	0.0370	1.2148	1.2361	0.0000	2,720.3995	2,720.3995	0.7426	0.0000	2,736.3526

Maximum	**66.5502**	**48.2539**	**23.0925**	**0.0397**	**18.2141**	**2.5780**	**20.7921**	**9.9699**	**2.3717**	**12.3416**	**0.0000**	**3,993.1243**	**3,993.1243**	**1.1984**	**0.0000**	**4,023.0834**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.4979	0.7094	45.3533	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8409
Energy	0.0194	0.1655	0.0704	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.2260	211.2260	4.0500e-003	3.8700e-003	212.4812
Mobile	0.4392	1.8096	5.1566	0.0171	1.3926	0.0164	1.4090	0.3722	0.0154	0.3876		1,732.9660	1,732.9660	0.0909		1,735.2381
Total	**36.9564**	**2.6845**	**50.5802**	**0.0970**	**1.3926**	**6.1323**	**7.5249**	**0.3722**	**6.1313**	**6.5035**	**638.7498**	**2,215.4911**	**2,854.2409**	**0.6877**	**0.0541**	**2,887.5602**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.4979	0.7094	45.3533	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8409
Energy	0.0194	0.1655	0.0704	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.2260	211.2260	4.0500e-003	3.8700e-003	212.4812
Mobile	0.4392	1.8096	5.1566	0.0171	1.3926	0.0164	1.4090	0.3722	0.0154	0.3876		1,732.9660	1,732.9660	0.0909		1,735.2381

Total	36.9564	2.6845	50.5802	0.0970	1.3926	6.1323	7.5249	0.3722	6.1313	6.5035	638.7498	2,215.4911	2,854.2409	0.6877	0.0541	2,887.5602

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2018	9/14/2018	5	10	
2	Building Construction	Building Construction	9/15/2018	8/2/2019	5	230	
3	Paving	Paving	8/3/2019	8/30/2019	5	20	
4	Architectural Coating	Architectural Coating	8/3/2019	8/30/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 83,835; Residential Outdoor: 27,945; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
Total	**4.5627**	**48.1988**	**22.4763**	**0.0380**	**18.0663**	**2.5769**	**20.6432**	**9.9307**	**2.3708**	**12.3014**		**3,831.6239**	**3,831.6239**	**1.1928**		**3,861.4448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0766	0.0552	0.6162	1.6200e-003	0.1479	1.0600e-003	0.1489	0.0392	9.8000e-004	0.0402		161.5004	161.5004	5.5300e-003		161.6386
Total	**0.0766**	**0.0552**	**0.6162**	**1.6200e-003**	**0.1479**	**1.0600e-003**	**0.1489**	**0.0392**	**9.8000e-004**	**0.0402**		**161.5004**	**161.5004**	**5.5300e-003**		**161.6386**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	**4.5627**	**48.1988**	**22.4763**	**0.0380**	**18.0663**	**2.5769**	**20.6432**	**9.9307**	**2.3708**	**12.3014**	**0.0000**	**3,831.6239**	**3,831.6239**	**1.1928**		**3,861.4448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0766	0.0552	0.6162	1.6200e-003	0.1479	1.0600e-003	0.1489	0.0392	9.8000e-004	0.0402		161.5004	161.5004	5.5300e-003		161.6386

Total	**0.0766**	**0.0552**	**0.6162**	**1.6200e-003**	**0.1479**	**1.0600e-003**	**0.1489**	**0.0392**	**9.8000e-004**	**0.0402**		**161.5004**	**161.5004**	**5.5300e-003**		**161.6386**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.0341	0.0245	0.2739	7.2000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		71.7780	71.7780	2.4600e-003		71.8394
Total	**0.0444**	**0.2880**	**0.3436**	**1.2800e-003**	**0.0793**	**2.5300e-003**	**0.0818**	**0.0213**	**2.4100e-003**	**0.0237**		**131.4159**	**131.4159**	**7.1900e-003**		**131.5955**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.0341	0.0245	0.2739	7.2000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		71.7780	71.7780	2.4600e-003		71.8394
Total	**0.0444**	**0.2880**	**0.3436**	**1.2800e-003**	**0.0793**	**2.5300e-003**	**0.0818**	**0.0213**	**2.4100e-003**	**0.0237**		**131.4159**	**131.4159**	**7.1900e-003**		**131.5955**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	9.2100e-003	0.2480	0.0640	5.5000e-004	0.0135	1.7300e-003	0.0153	3.9000e-003	1.6500e-003	5.5500e-003		59.2033	59.2033	4.5700e-003		59.3176
Worker	0.0314	0.0219	0.2475	7.0000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		69.6160	69.6160	2.2200e-003		69.6716
Total	**0.0406**	**0.2699**	**0.3116**	**1.2500e-003**	**0.0793**	**2.2000e-003**	**0.0815**	**0.0213**	**2.0800e-003**	**0.0234**		**128.8193**	**128.8193**	**6.7900e-003**		**128.9892**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	9.2100e-003	0.2480	0.0640	5.5000e-004	0.0135	1.7300e-003	0.0153	3.9000e-003	1.6500e-003	5.5500e-003		59.2033	59.2033	4.5700e-003		59.3176
Worker	0.0314	0.0219	0.2475	7.0000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.3000e-004	0.0179		69.6160	69.6160	2.2200e-003		69.6716
Total	**0.0406**	**0.2699**	**0.3116**	**1.2500e-003**	**0.0793**	**2.2000e-003**	**0.0815**	**0.0213**	**2.0800e-003**	**0.0234**		**128.8193**	**128.8193**	**6.7900e-003**		**128.9892**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4544**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4544**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0589	0.0411	0.4641	1.3100e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		130.5300	130.5300	4.1700e-003		130.6342
Total	**0.0589**	**0.0411**	**0.4641**	**1.3100e-003**	**0.1232**	**8.8000e-004**	**0.1241**	**0.0327**	**8.1000e-004**	**0.0335**		**130.5300**	**130.5300**	**4.1700e-003**		**130.6342**

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.7625					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**65.0290**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.8500e-003	5.4800e-003	0.0619	1.7000e-004	0.0164	1.2000e-004	0.0166	4.3600e-003	1.1000e-004	4.4700e-003		17.4040	17.4040	5.6000e-004		17.4179
Total	**7.8500e-003**	**5.4800e-003**	**0.0619**	**1.7000e-004**	**0.0164**	**1.2000e-004**	**0.0166**	**4.3600e-003**	**1.1000e-004**	**4.4700e-003**		**17.4040**	**17.4040**	**5.6000e-004**		**17.4179**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.7625					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**65.0290**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.8500e-003	5.4800e-003	0.0619	1.7000e-004	0.0164	1.2000e-004	0.0166	4.3600e-003	1.1000e-004	4.4700e-003		17.4040	17.4040	5.6000e-004		17.4179
Total	**7.8500e-003**	**5.4800e-003**	**0.0619**	**1.7000e-004**	**0.0164**	**1.2000e-004**	**0.0166**	**4.3600e-003**	**1.1000e-004**	**4.4700e-003**		**17.4040**	**17.4040**	**5.6000e-004**		**17.4179**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4392	1.8096	5.1566	0.0171	1.3926	0.0164	1.4090	0.3722	0.0154	0.3876		1,732.9660	1,732.9660	0.0909		1,735.2381
Unmitigated	0.4392	1.8096	5.1566	0.0171	1.3926	0.0164	1.4090	0.3722	0.0154	0.3876		1,732.9660	1,732.9660	0.0909		1,735.2381

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	230.00	230.00	230.00	656,720	656,720
Total	230.00	230.00	230.00	656,720	656,720

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0194	0.1655	0.0704	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.2260	211.2260	4.0500e-003	3.8700e-003	212.4812
NaturalGas Unmitigated	0.0194	0.1655	0.0704	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.2260	211.2260	4.0500e-003	3.8700e-003	212.4812

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1795.42	0.0194	0.1655	0.0704	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.2260	211.2260	4.0500e-003	3.8700e-003	212.4812
Total		**0.0194**	**0.1655**	**0.0704**	**1.0600e-003**		**0.0134**	**0.0134**		**0.0134**	**0.0134**		**211.2260**	**211.2260**	**4.0500e-003**	**3.8700e-003**	**212.4812**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1.79542	0.0194	0.1655	0.0704	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.2260	211.2260	4.0500e-003	3.8700e-003	212.4812
Total		**0.0194**	**0.1655**	**0.0704**	**1.0600e-003**		**0.0134**	**0.0134**		**0.0134**	**0.0134**		**211.2260**	**211.2260**	**4.0500e-003**	**3.8700e-003**	**212.4812**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	36.4979	0.7094	45.3533	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8409
Unmitigated	36.4979	0.7094	45.3533	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8409

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3549					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	35.1991	0.6874	43.4495	0.0787		6.0920	6.0920		6.0920	6.0920	638.7498	267.8824	906.6322	0.5895	0.0502	936.3409
Landscaping	0.0580	0.0220	1.9038	1.0000e-004		0.0105	0.0105		0.0105	0.0105		3.4167	3.4167	3.3300e-003		3.5000
Total	**36.4979**	**0.7094**	**45.3533**	**0.0788**		**6.1025**	**6.1025**		**6.1025**	**6.1025**	**638.7498**	**271.2991**	**910.0489**	**0.5928**	**0.0502**	**939.8409**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3549					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	35.1991	0.6874	43.4495	0.0787		6.0920	6.0920		6.0920	6.0920	638.7498	267.8824	906.6322	0.5895	0.0502	936.3409
Landscaping	0.0580	0.0220	1.9038	1.0000e-004		0.0105	0.0105		0.0105	0.0105		3.4167	3.4167	3.3300e-003		3.5000
Total	**36.4979**	**0.7094**	**45.3533**	**0.0788**		**6.1025**	**6.1025**		**6.1025**	**6.1025**	**638.7498**	**271.2991**	**910.0489**	**0.5928**	**0.0502**	**939.8409**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Shadow Mountain Residences

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	23.00	Dwelling Unit	8.06	41,400.00	66

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot Acreage from PD.

Construction Phase - No Demolition or Grading phases per Mary Bilse email 7/24/17.

Vehicle Trips - Daily trip generation rates from the Traffic Analysis 6-14-17

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	11/22/2019	8/30/2019
tblConstructionPhase	PhaseEndDate	9/27/2019	8/2/2019
tblConstructionPhase	PhaseEndDate	10/25/2019	8/30/2019
tblConstructionPhase	PhaseEndDate	10/12/2018	9/14/2018
tblConstructionPhase	PhaseStartDate	10/26/2019	8/3/2019
tblConstructionPhase	PhaseStartDate	11/10/2018	9/15/2018

tblConstructionPhase	PhaseStartDate	9/28/2019	8/3/2019
tblConstructionPhase	PhaseStartDate	9/29/2018	9/1/2018
tblLandUse	LotAcreage	7.47	8.06
tblProjectCharacteristics	OperationalYear	2018	2020
tblVehicleTrips	ST_TR	9.91	10.00
tblVehicleTrips	SU_TR	8.62	10.00
tblVehicleTrips	WD_TR	9.52	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1267	1.1413	0.7960	1.2700e-003	0.0940	0.0700	0.1640	0.0506	0.0655	0.1162	0.0000	112.8065	112.8065	0.0278	0.0000	113.5020
2019	0.8505	1.8156	1.5149	2.4400e-003	7.3300e-003	0.1090	0.1164	1.9700e-003	0.1024	0.1044	0.0000	214.0333	214.0333	0.0513	0.0000	215.3161
Maximum	**0.8505**	**1.8156**	**1.5149**	**2.4400e-003**	**0.0940**	**0.1090**	**0.1640**	**0.0506**	**0.1024**	**0.1162**	**0.0000**	**214.0333**	**214.0333**	**0.0513**	**0.0000**	**215.3161**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1267	1.1413	0.7960	1.2700e-003	0.0940	0.0700	0.1640	0.0506	0.0655	0.1162	0.0000	112.8064	112.8064	0.0278	0.0000	113.5019
2019	0.8505	1.8156	1.5149	2.4400e-003	7.3300e-003	0.1090	0.1164	1.9700e-003	0.1024	0.1044	0.0000	214.0331	214.0331	0.0513	0.0000	215.3159

Maximum	**0.8505**	**1.8156**	**1.5149**	**2.4400e-003**	**0.0940**	**0.1090**	**0.1640**	**0.0506**	**0.1024**	**0.1162**	**0.0000**	**214.0331**	**214.0331**	**0.0513**	**0.0000**	**215.3159**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2018**	**11-30-2018**	0.9907	0.9907
2	**12-1-2018**	**2-28-2019**	0.7930	0.7930
3	**3-1-2019**	**5-31-2019**	0.7805	0.7805
4	**6-1-2019**	**8-31-2019**	1.3711	1.3711
		Highest	1.3711	1.3711

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6748	0.0302	1.9528	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1126
Energy	3.5300e-003	0.0302	0.0129	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	100.0960	100.0960	3.2900e-003	1.1800e-003	100.5310
Mobile	0.0759	0.3404	0.9132	2.9700e-003	0.2475	2.9900e-003	0.2505	0.0663	2.8100e-003	0.0691	0.0000	273.8246	273.8246	0.0149	0.0000	274.1969
Waste						0.0000	0.0000		0.0000	0.0000	5.4929	0.0000	5.4929	0.3246	0.0000	13.6085
Water						0.0000	0.0000		0.0000	0.0000	0.4754	9.8070	10.2825	0.0492	1.2300e-003	11.8810
Total	**1.7542**	**0.4008**	**2.8789**	**6.4000e-003**	**0.2475**	**0.2562**	**0.5037**	**0.0663**	**0.2560**	**0.3223**	**29.7264**	**393.9704**	**423.6968**	**0.4142**	**4.2800e-003**	**435.3300**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6748	0.0302	1.9528	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1126
Energy	3.5300e-003	0.0302	0.0129	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	100.0960	100.0960	3.2900e-003	1.1800e-003	100.5310
Mobile	0.0759	0.3404	0.9132	2.9700e-003	0.2475	2.9900e-003	0.2505	0.0663	2.8100e-003	0.0691	0.0000	273.8246	273.8246	0.0149	0.0000	274.1969
Waste						0.0000	0.0000		0.0000	0.0000	5.4929	0.0000	5.4929	0.3246	0.0000	13.6085
Water						0.0000	0.0000		0.0000	0.0000	0.4754	9.8070	10.2825	0.0492	1.2300e-003	11.8810
Total	**1.7542**	**0.4008**	**2.8789**	**6.4000e-003**	**0.2475**	**0.2562**	**0.5037**	**0.0663**	**0.2560**	**0.3223**	**29.7264**	**393.9704**	**423.6968**	**0.4142**	**4.2800e-003**	**435.3300**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/1/2018	9/14/2018	5	10	
2	Building Construction	Building Construction	9/15/2018	8/2/2019	5	230	
3	Paving	Paving	8/3/2019	8/30/2019	5	20	
4	Architectural Coating	Architectural Coating	8/3/2019	8/30/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 83,835; Residential Outdoor: 27,945; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3800	17.3800	5.4100e-003	0.0000	17.5152
Total	**0.0228**	**0.2410**	**0.1124**	**1.9000e-004**	**0.0903**	**0.0129**	**0.1032**	**0.0497**	**0.0119**	**0.0615**	**0.0000**	**17.3800**	**17.3800**	**5.4100e-003**	**0.0000**	**17.5152**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.0000e-004	2.9200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6946	0.6946	2.0000e-005	0.0000	0.6952
Total	**3.8000e-004**	**3.0000e-004**	**2.9200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6946**	**0.6946**	**2.0000e-005**	**0.0000**	**0.6952**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3799	17.3799	5.4100e-003	0.0000	17.5152
Total	**0.0228**	**0.2410**	**0.1124**	**1.9000e-004**	**0.0903**	**0.0129**	**0.1032**	**0.0497**	**0.0119**	**0.0615**	**0.0000**	**17.3799**	**17.3799**	**5.4100e-003**	**0.0000**	**17.5152**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.0000e-004	2.9200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6946	0.6946	2.0000e-005	0.0000	0.6952
Total	**3.8000e-004**	**3.0000e-004**	**2.9200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6946**	**0.6946**	**2.0000e-005**	**0.0000**	**0.6952**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1018	0.8888	0.6681	1.0200e-003		0.0570	0.0570		0.0536	0.0536	0.0000	90.3516	90.3516	0.0221	0.0000	90.9050
Total	**0.1018**	**0.8888**	**0.6681**	**1.0200e-003**		**0.0570**	**0.0570**		**0.0536**	**0.0536**	**0.0000**	**90.3516**	**90.3516**	**0.0221**	**0.0000**	**90.9050**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0102	2.7900e-003	2.0000e-005	5.0000e-004	8.0000e-005	5.8000e-004	1.5000e-004	8.0000e-005	2.2000e-004	0.0000	2.0342	2.0342	1.7000e-004	0.0000	2.0384
Worker	1.3000e-003	1.0300e-003	9.8700e-003	3.0000e-005	2.4400e-003	2.0000e-005	2.4600e-003	6.5000e-004	2.0000e-005	6.6000e-004	0.0000	2.3462	2.3462	8.0000e-005	0.0000	2.3482
Total	**1.7000e-003**	**0.0112**	**0.0127**	**5.0000e-005**	**2.9400e-003**	**1.0000e-004**	**3.0400e-003**	**8.0000e-004**	**1.0000e-004**	**8.8000e-004**	**0.0000**	**4.3804**	**4.3804**	**2.5000e-004**	**0.0000**	**4.3866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1018	0.8888	0.6681	1.0200e-003		0.0570	0.0570		0.0536	0.0536	0.0000	90.3514	90.3514	0.0221	0.0000	90.9048
Total	**0.1018**	**0.8888**	**0.6681**	**1.0200e-003**		**0.0570**	**0.0570**		**0.0536**	**0.0536**	**0.0000**	**90.3514**	**90.3514**	**0.0221**	**0.0000**	**90.9048**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0102	2.7900e-003	2.0000e-005	5.0000e-004	8.0000e-005	5.8000e-004	1.5000e-004	8.0000e-005	2.2000e-004	0.0000	2.0342	2.0342	1.7000e-004	0.0000	2.0384
Worker	1.3000e-003	1.0300e-003	9.8700e-003	3.0000e-005	2.4400e-003	2.0000e-005	2.4600e-003	6.5000e-004	2.0000e-005	6.6000e-004	0.0000	2.3462	2.3462	8.0000e-005	0.0000	2.3482

Total	**1.7000e-003**	**0.0112**	**0.0127**	**5.0000e-005**	**2.9400e-003**	**1.0000e-004**	**3.0400e-003**	**8.0000e-004**	**1.0000e-004**	**8.8000e-004**	**0.0000**	**4.3804**	**4.3804**	**2.5000e-004**	**0.0000**	**4.3866**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1818	1.6231	1.3216	2.0700e-003		0.0993	0.0993		0.0934	0.0934	0.0000	181.0302	181.0302	0.0441	0.0000	182.1328
Total	**0.1818**	**1.6231**	**1.3216**	**2.0700e-003**		**0.0993**	**0.0993**		**0.0934**	**0.0934**	**0.0000**	**181.0302**	**181.0302**	**0.0441**	**0.0000**	**182.1328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.2000e-004	0.0193	5.1900e-003	4.0000e-005	1.0200e-003	1.3000e-004	1.1600e-003	3.0000e-004	1.3000e-004	4.2000e-004	0.0000	4.0914	4.0914	3.3000e-004	0.0000	4.0997
Worker	2.4300e-003	1.8600e-003	0.0180	5.0000e-005	4.9400e-003	4.0000e-005	4.9800e-003	1.3100e-003	3.0000e-005	1.3500e-003	0.0000	4.6107	4.6107	1.5000e-004	0.0000	4.6145
Total	**3.1500e-003**	**0.0212**	**0.0232**	**9.0000e-005**	**5.9600e-003**	**1.7000e-004**	**6.1400e-003**	**1.6100e-003**	**1.6000e-004**	**1.7700e-003**	**0.0000**	**8.7022**	**8.7022**	**4.8000e-004**	**0.0000**	**8.7141**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1818	1.6231	1.3216	2.0700e-003		0.0993	0.0993		0.0934	0.0934	0.0000	181.0300	181.0300	0.0441	0.0000	182.1325
Total	**0.1818**	**1.6231**	**1.3216**	**2.0700e-003**		**0.0993**	**0.0993**		**0.0934**	**0.0934**	**0.0000**	**181.0300**	**181.0300**	**0.0441**	**0.0000**	**182.1325**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.2000e-004	0.0193	5.1900e-003	4.0000e-005	1.0200e-003	1.3000e-004	1.1600e-003	3.0000e-004	1.3000e-004	4.2000e-004	0.0000	4.0914	4.0914	3.3000e-004	0.0000	4.0997
Worker	2.4300e-003	1.8600e-003	0.0180	5.0000e-005	4.9400e-003	4.0000e-005	4.9800e-003	1.3100e-003	3.0000e-005	1.3500e-003	0.0000	4.6107	4.6107	1.5000e-004	0.0000	4.6145
Total	**3.1500e-003**	**0.0212**	**0.0232**	**9.0000e-005**	**5.9600e-003**	**1.7000e-004**	**6.1400e-003**	**1.6100e-003**	**1.6000e-004**	**1.7700e-003**	**0.0000**	**8.7022**	**8.7022**	**4.8000e-004**	**0.0000**	**8.7141**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	**0.0145**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0145**	**0.1524**	**0.1467**	**2.3000e-004**		**8.2500e-003**	**8.2500e-003**		**7.5900e-003**	**7.5900e-003**	**0.0000**	**20.4752**	**20.4752**	**6.4800e-003**	**0.0000**	**20.6371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.5000e-004	4.3900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1227	1.1227	4.0000e-005	0.0000	1.1237
Total	**5.9000e-004**	**4.5000e-004**	**4.3900e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.1227**	**1.1227**	**4.0000e-005**	**0.0000**	**1.1237**

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
Total	**0.6503**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5587**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	8.0000e-005	6.0000e-005	5.9000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1497	0.1497	0.0000	0.0000	0.1498
Total	**8.0000e-005**	**6.0000e-005**	**5.9000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1497**	**0.1497**	**0.0000**	**0.0000**	**0.1498**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
Total	**0.6503**	**0.0184**	**0.0184**	**3.0000e-005**		**1.2900e-003**	**1.2900e-003**		**1.2900e-003**	**1.2900e-003**	**0.0000**	**2.5533**	**2.5533**	**2.2000e-004**	**0.0000**	**2.5586**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	5.9000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1497	0.1497	0.0000	0.0000	0.1498
Total	**8.0000e-005**	**6.0000e-005**	**5.9000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1497**	**0.1497**	**0.0000**	**0.0000**	**0.1498**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0759	0.3404	0.9132	2.9700e-003	0.2475	2.9900e-003	0.2505	0.0663	2.8100e-003	0.0691	0.0000	273.8246	273.8246	0.0149	0.0000	274.1969
Unmitigated	0.0759	0.3404	0.9132	2.9700e-003	0.2475	2.9900e-003	0.2505	0.0663	2.8100e-003	0.0691	0.0000	273.8246	273.8246	0.0149	0.0000	274.1969

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	230.00	230.00	230.00	656,720	656,720
Total	230.00	230.00	230.00	656,720	656,720

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	65.1252	65.1252	2.6200e-003	5.4000e-004	65.3523
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	65.1252	65.1252	2.6200e-003	5.4000e-004	65.3523
NaturalGas Mitigated	3.5300e-003	0.0302	0.0129	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9708	34.9708	6.7000e-004	6.4000e-004	35.1787
NaturalGas Unmitigated	3.5300e-003	0.0302	0.0129	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9708	34.9708	6.7000e-004	6.4000e-004	35.1787

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	655329	3.5300e-003	0.0302	0.0129	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9708	34.9708	6.7000e-004	6.4000e-004	35.1787
Total		**3.5300e-003**	**0.0302**	**0.0129**	**1.9000e-004**		**2.4400e-003**	**2.4400e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**34.9708**	**34.9708**	**6.7000e-004**	**6.4000e-004**	**35.1787**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	655329	3.5300e-003	0.0302	0.0129	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9708	34.9708	6.7000e-004	6.4000e-004	35.1787
Total		**3.5300e-003**	**0.0302**	**0.0129**	**1.9000e-004**		**2.4400e-003**	**2.4400e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**34.9708**	**34.9708**	**6.7000e-004**	**6.4000e-004**	**35.1787**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	199276	65.1252	2.6200e-003	5.4000e-004	65.3523
Total		**65.1252**	**2.6200e-003**	**5.4000e-004**	**65.3523**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	199276	65.1252	2.6200e-003	5.4000e-004	65.3523
Total		**65.1252**	**2.6200e-003**	**5.4000e-004**	**65.3523**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6748	0.0302	1.9528	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1126
Unmitigated	1.6748	0.0302	1.9528	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1126

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0648					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4432	0.0282	1.7814	3.2300e-003		0.2498	0.2498		0.2498	0.2498	23.7580	9.9638	33.7218	0.0219	1.8700e-003	34.8268
Landscaping	5.2200e-003	1.9800e-003	0.1714	1.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	0.2790	0.2790	2.7000e-004	0.0000	0.2858
Total	**1.6748**	**0.0302**	**1.9528**	**3.2400e-003**		**0.2507**	**0.2507**		**0.2507**	**0.2507**	**23.7580**	**10.2427**	**34.0008**	**0.0222**	**1.8700e-003**	**35.1126**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0648					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4432	0.0282	1.7814	3.2300e-003		0.2498	0.2498		0.2498	0.2498	23.7580	9.9638	33.7218	0.0219	1.8700e-003	34.8268
Landscaping	5.2200e-003	1.9800e-003	0.1714	1.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	0.2790	0.2790	2.7000e-004	0.0000	0.2858
Total	**1.6748**	**0.0302**	**1.9528**	**3.2400e-003**		**0.2507**	**0.2507**		**0.2507**	**0.2507**	**23.7580**	**10.2427**	**34.0008**	**0.0222**	**1.8700e-003**	**35.1126**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.2825	0.0492	1.2300e-003	11.8810
Unmitigated	10.2825	0.0492	1.2300e-003	11.8810

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.49854 / 0.944733	10.2825	0.0492	1.2300e-003	11.8810
Total		**10.2825**	**0.0492**	**1.2300e-003**	**11.8810**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.49854 / 0.944733	10.2825	0.0492	1.2300e-003	11.8810
Total		**10.2825**	**0.0492**	**1.2300e-003**	**11.8810**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	5.4929	0.3246	0.0000	13.6085
Unmitigated	5.4929	0.3246	0.0000	13.6085

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	27.06	5.4929	0.3246	0.0000	13.6085
Total		**5.4929**	**0.3246**	**0.0000**	**13.6085**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	27.06	5.4929	0.3246	0.0000	13.6085
Total		**5.4929**	**0.3246**	**0.0000**	**13.6085**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Biological Resources Memorandum

July 5, 2017

Shadow Mountain Community Church
2100 Greenfield Drive
El Cajon, California 92019

Subject: Shadow Mountain Residential Project, San Diego County, California– Preliminary Biological Resources Assessment

Dear Shadow Mountain Community Church:

This Biological Letter Report (BLR) summarizes the existing conditions and describes potential effects on biological resources associated with the Shadow Mountain Residential Project (Proposed Project). Shadow Mountain Community Church (SMCC) is located in the City of El Cajon, approximately one mile southeast of the Interstate 8 (1-8) and Greenfield Drive interchange. The approximately 54-acre community church complex is composed of east, west, and north campuses. Greenfield Drive divides the east and west campuses and the north campus is located on the north side of Madison Avenue. The topography of the east and north campuses is relatively flat, but the west campus is located on a prominent knoll west of Greenfield Drive. The proposed residential project has two components: one located on the north campus (2000 East Madison Avenue) and one located on the west campus (2075 East Madison Avenue) (Figure 1: Project Location). The Proposed Project is located within the El Cajon land grant and within the Geological Survey (USGS) 7.5-minute topographic map, Jamul Mountains (USGS 1975; Figure 2: Project Vicinity).

The purpose of this BLR is to assist the SMCC in determining potential impacts to biological resources as required by the California Environmental Quality Act (CEQA). This BLR will help SMCC in understanding potentially significant impacts to biological resources (sensitive vegetation communities, special-status plants, special-status wildlife, and jurisdictional wetlands and waters) resulting from the Proposed Project, and how to reduce these impacts through appropriate avoidance and minimization efforts.

Project Description

The Proposed Project would consist of a 23-lot residential subdivision located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The north campus would be subdivided into 11 single-family lots on a 3.58-acre parcel. The west campus will be subdivided into 12 single-family lots on a 4.48-acre parcel.

Methods

A literature review and biological surveys were conducted for the Proposed Project within the Survey Area, which includes 3.58-acre and 4.48-acre parcels, described in the Project Description section, above. The results of the literature review were compiled into a list of potentially occurring

plant and wildlife species, and each species was analyzed for its potential to occur within the Proposed Project.

Biological Surveys

ICF botanist Lance Woolley, and ICF wildlife biologist Courtney Casey performed a habitat assessment in conjunction with vegetation mapping within the Survey Area on June 21, 2017. Prior to conducting this field work, ICF's biologists reviewed background information provided in the previous environmental documentation for Shadow Mountain Community Center.

Table 1: Biological Surveys

Survey	Date	Personnel
Habitat assessment for special-status plants and animals	June 21, 2017	Courtney Casey and Lance Woolley
Vegetation mapping	June 21, 2017	Lance Woolley

Results

Vegetation Communities

Two land cover types occur within the Survey Area: disturbed habitat and urban/developed (Figure 3: Vegetation Communities and Table 1: Vegetation Communities and Land Cover Types within the Proposed Project). A photo log showing the two land cover types is provided as Attachment A: Photo Log.

Table 2: Vegetation Communities and Land Cover Types

Vegetation Community/ Land Cover Type	3.58-Acre Parcel (acres)	4.48-Acre Parcel (acres)
Disturbed habitat	2.75	4.09
Urban/developed	0.83	0.39
TOTAL	**3.58**	**4.48**

Special-Status Species

Special-Status Plant Species

Based on the literature review and field surveys conducted for the Proposed Project, special-status plant species documented from within 1-mile of the Proposed Project were evaluated for their potential to occur within the Proposed Project (**Error! Reference source not found.**). Three special-status plant species are known from within 1-mile of the Proposed Project: San Diego

ambrosia (*Ambrosia pumila*), Dean's milk-vetch (*Astragalus deanei*), and Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*). These three species are not expected to occur within the Proposed Project due to a lack of suitable habitat. The Proposed Project consists of paved areas and areas dominated by non-native species that are periodically mowed. No other special-status plant species are expected to occur within the Proposed Project.

Special-Status Wildlife Species

No USFWS-designated critical habitat for any special-status wildlife species is present within the Proposed Project (USFWS 2017). Based on the literature review and field surveys conducted for the Proposed Project, special-status plant species documented from within 1-mile of the Proposed Project were evaluated for their potential to occur (Attachment C: Special-Status Wildlife Species Known or with Potential to Occur in the Survey Area). Nine special-status wildlife species were assessed for their potential to occur within the Proposed Project: orange-throat whiptail (*Aspidoscelis hyperythra*), Coast horned lizard (*Phrynosoma blainvillii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), coastal California gnatcatcher (*Polioptila californica californica*), Dulzura pocket mouse (*Chaetodipus californicus femoralis)*, Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax)*, Townsend's big-eared bat (*Corynorhinus townsendii*), San Diego desert woodrat (*Neotoma lepida intermedia*), and American badger (*Taxidea taxus*). These nine species are not expected to occur within the Proposed Project due to a lack of suitable habitat. The Proposed Project consists of paved areas and areas dominated by non-native plant species that are periodically mowed. No other special-status wildlife species are expected to occur within the Proposed Project.

Migratory Birds

There is a potential for migratory bird species, protected under the Migratory Bird Treaty Act (MBTA), to be present within ornamental trees, located within the Proposed Project. These trees would likely be taken down due to construction of new facilities.

During the biological survey, no potentially jurisdictional wetlands or water resources were noted. All areas within the Proposed Project are upland habitats or developed areas with no water features present.

Impacts and Avoidance/ Minimization Measures

Impact Summary

Sensitive Vegetation Communities

As described above, the only vegetation within the Proposed Project consists of disturbed and urban/development. Neither of these communities is considered a sensitive vegetation community under CEQA. As such, implementation of the Proposed Project would not disturb any sensitive vegetation communities.

Special-Status Plants

No impacts to special-status plants are expected to occur with the implementation of the Proposed Project.

Special-Status Wildlife

No impacts to special-status wildlife species are expected to occur with the implementation of the Proposed Project.

Migratory Birds

The federal Migratory Bird Treaty Act (16 USC Section 703(a)) first enacted in 1916, prohibits any person, unless permitted by regulation, to:

> …pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport, cause to be transported, carry, or cause to be carried or receive for shipment, transportation, carriage, or export any migratory bird, any part, nest, or egg of any such bird, or any product…composed in whole or part, of any such bird or any part, nest, or egg thereof…
>
> The list of migratory birds includes nearly all migratory bird species native to the U.S. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. The statute was extended in 1974 to include parts of birds, as well as eggs and nests.

There is a potential for impacts to migratory birds protected under the MBTA if construction were to occur within the nesting bird season. Construction activities could disrupt breeding and foraging activities, and could prevent birds from attending to nests or could cause birds to flush from their nests, endangering eggs and chicks, if trees were removed or trimmed while an active nest was present.

In order to avoid and minimize impacts to nesting birds protected under the MBTA, the following Applicant Proposed Measures (APMs) will be implemented.

> **APM-BR-1**: Potentially significant impacts on tree-nesting raptors and other birds protected under the MBTA would be avoided by restricting vegetation clearing or grading during the breeding season for migratory birds (approximately February 15 through August 31 annually) unless, through pre-construction nesting bird surveys by a qualified biologist, it is determined that no nesting birds protected by the MBTA are located within grading/vegetation clearing areas. If active nests are identified within the impact area on-site, all construction activities in close proximity to active nests shall be delayed or otherwise modified as necessary to prevent nest failure caused by construction activities.
>
> **APM-BR-2**: If construction occurs during nesting bird season, all employees will receive environmental training on biological resources within the Proposed Project area. The training shall include a description of the species of concern and their habitats, the general provisions of applicable environmental regulations, the need to adhere to the provisions of the regulations, the penalties associated with violating the provisions of the regulations, the general measures

that are being implemented to conserve the species of concern as they relate to the project, the access routes to the project, and project boundaries within which the project- related activities must be accomplished. This training shall include a detailed review of how project personnel can identify sensitive biological resources in the project area which need to be avoided or where work activities will be restricted.

Conclusion

As discussed above, the Proposed Project would not have an impact on special-status plant and wildlife species, or sensitive natural communities, and would avoid and minimize impacts and disturbance to nesting birds protected under the MBTA through APMs. Additionally, no jurisdictional resources would be impacted because none are present within the Proposed Project.

Sincerely,

Makela Mangrich

Makela N. Mangrich, AICP
Senior Associate

Attachments

Attachment A: Photo Log

Attachment B: Special-Status Plant Species Known or with Potential to Occur

Attachment C: Special-Status Wildlife Species Known or with Potential to Occur

References

California Department of Fish and Wildlife (CDFW). 2017a. RareFind 5, Records search covering the United States Geological Survey 7.5-minute series topographic maps, Jamul Mtns, California quadrangle. Resource Management and Planning Division. Biogeographic Data Branch, Natural Diversity Database. Sacramento, California.

———. 2017b. Special Animals List: April 2017. Online: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406. Site visited on June 20, 2017.

California Native Plant Society (CNPS). 2001. Botanical Survey Guidelines. Online: http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf. Site visited on June, 2017.

———. 2017. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Online: http://www.rareplants.cnps.org. Site visited on March 8, 2016.

U.S. Fish and Wildlife Service (USFWS). 2017. Environmental Conservation Online System, Threatened & Endangered Species Active Critical Habitat Report. Online: https://ecos.fws.gov/ecp/report/table/critical-habitat.html. Site visited on June 20, 2017.

U.S. Geological Survey. 2017. Jamul Mtns, 7.5-minute Quadrangle.

Photograph: 1

Photo Date: June 29, 2017

Location: SMCC north campus

Direction: View facing north

Comment: Disturbed habitat

Photograph: 2

Photo Date: June 29, 2017

Location: SMCC north campus

Direction: View facing south

Comment: Disturbed habitat

Photograph: 3

Photo Date: June 29, 2017

Location: SMCC north Campus

Direction: View facing east

Comment: Disturbed habitat

Photograph: 4

Photo Date: June 29, 2017

Location: SMCC north campus

Direction: View facing west

Comment: Disturbed habitat

Photograph: 5

Photo Date: June 29, 2017

Location: SMCC west campus

Direction: View facing northeast

Comment: Disturbed habitat

Photograph: 6

Photo Date: June 29, 2017

Location: SMCC west campus

Direction: View facing east

Comment: Disturbed habitat

Photograph: 7

Photo Date: June 29, 2017

Location: SMCC north campus

Direction: View facing northeast

Comment: Disturbed habitat

Common Name (Scientific Name)	Sensitivity Code & Status[a]	Habitat Preference/Requirements	Potential to Occur[b]	Rationale
PLANTS				
San Diego ambrosia (*Ambrosia pumila)*	FE, 1B.1, SDC List A, SDC NE, SD NE	Rhizomatous herb. Sandy loam or clay soils in chaparral, coastal sage scrub, valley and foothill grassland, vernal pools; often in disturbed areas or sometimes alkaline areas. Can occur in creek beds, seasonally dry drainages, and floodplains; 20-415 m (66-1362 ft). Blooming period: April - October	Not Expected	The Proposed Project does not contain suitable habitat for this species. The Proposed Project consists of paved areas and areas dominated by nonnative species that are periodically mowed.
Dean's milk-vetch (*Astragalus deanei*)	1B.1, SDC List A	Perennial herb. Open shrubby slopes, coastal sage scrub, chaparral, cismontane woodland, riparian forest, and sandy washes; 75-695 m (246-2279 ft). Blooming period: February - May	Not Expected	The Proposed Project does not contain suitable habitat for this species. The Proposed Project consists of paved areas and areas dominated by nonnative species that are periodically mowed.
Palmer's goldenbush (*Ericameria palmeri var. palmeri*)	1B.1, SDC List B, SDC NE	Evergreen shrub. Coastal drainages, in mesic chaparral sites, or rarely in coastal sage scrub; below 600 m (1969 ft). Blooming period: August - October (uncommon in July)	Not Expected	The Proposed Project does not contain suitable habitat for this species. The Proposed Project consists of paved areas and areas dominated by nonnative species that are periodically mowed.

[a] Status Codes

Federal

FE = Federally listed; Endangered
PE = Proposed Endangered
FT = Federally listed; Threatened
FC = Federal Candidate for Listing
FSC = Federal Species of Concern
D = Delisted

State

SE = State listed; Endangered
CE = Candidate Endangered
ST = State listed; Threatened CT= Candidate Threatened
R = Rare (Native Plant Protection Act)
SSC = California Species of Special Concern
CFP = California Fully Protected Species

CNPS Rare Plant Rank (CRPR)

1A = Plants presumed extinct in California
1B = Plants rare, threatened, or endangered in California and elsewhere
2 = Plants rare, threatened, or endangered in California, but more common elsewhere
3 = Plants about which we need more information
4 = Limited distribution (Watch List)

CNPS CRPR Threat Codes

0.1 = Seriously endangered in California
0.2 = Fairly endangered in California
0.3 = Not very endangered in California

[b] Potential to Occur Definitions

Present: Species documented on the project site.

High: Species is known to occur in the immediate vicinity of the project site and high quality suitable habitat is present.

Moderate: Species is known to occur in the region and suitable habitat is present.

Low: Suitable habitat is present but is limited in extent and of poor quality.

Not Expected: No suitable habitat is present (i.e., lacks soils, range, topography, and/or vegetation)

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Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur[b]	Rationale
REPTILES				
Orange-throat whiptail (Aspidoscelis hyperythra)	WL	Found in coastal scrub, chaparral, and valley-foothill hardwood habitats. Often found in wash or sandy areas.	Not Expected	No suitable habitat is present.
Coast horned lizard (*Phrynosoma blainvillii*)	SSC	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging.	Not Expected	No suitable habitat is present.
BIRDS				
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	WL	Resident of coastal sage scrub and sparse mixed chaparral.	Not Expected	No suitable habitat is present.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT SSC	Prefer open scrubby habitats such as coastal sage scrub and some forms of chaparral.	Not Expected	No suitable habitat is present.
MAMMALS				
Dulzura pocket mouse (*Chaetodipus californicus femoralis)*	SSC	Coastal and montane regions in grassland, sage scrub, and chaparral slopes.	Not Expected	No suitable habitat is present.
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax)*	SSC	Occurs in arid coastal and desert habitats including coastal scrub, chaparral, chamise-redshank, desert scrub, pinyon-juniper, and annual grassland	Not Expected	No suitable habitat is present.
Townsend's big-eared bat (Corynorhinus townsendii)	CSC	Forages in arid areas and open coniferous forests. Roosts in rocky areas with caves or tunnels.	Not Expected	No suitable habitat is present.
San Diego desert woodrat (*Neotoma lepida intermedia*)	SSC	Variety of shrub and desert habitats primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.	Not Expected	No suitable habitat is present.
American badger (*Taxidea taxus*)	SSC	Inhabit a diversity of habitats with principal requirements of sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, mountain meadows, and desert scrub.	Not Expected	No suitable habitat is present.

Attachment C. Special-Status Wildlife Species with Potential to Occur

Common Name (*Scientific Name*)	Sensitivity Code & Status	Habitat Preference/Requirements	Potential to Occur[b]	Rationale
LEGEND: **[a]STATUS:** **Federal** FE - listed as endangered under the federal Endangered Species Act. FT - listed as threatened under the federal Endangered Species Act. FP – listed as fully protected F Delisted = Delisted **State** SE - listed as endangered under the California Endangered Species Act. ST- listed as threatened under the California Endangered Species Act. CT- candidate threatened S Delisted - Delisted CDFW FP – fully protected species in California. SSC – species of special concern in California. WL – Watch List				
[b] Potential to Occur Definitions Present: Species documented on the project site. High: Species is known to occur in the immediate vicinity of the project site and high quality suitable habitat is present. Moderate: Species is known to occur in the region and suitable habitat is present. Low: Suitable habitat is present but is limited in extent and of poor quality. Not Expected: No suitable habitat is present (i.e., lacks soils, range, topography, and/or vegetation)				

Appendix C

Cultural Resources Memorandum

July 25, 2017

Shadow Mountain Community Church
2100 Greenfield Drive
El Cajon, California 92019

Subject: **Shadow Mountain Residential Project, San Diego County, California– Preliminary Cultural Resources Assessment**

Dear Shadow Mountain Community Church:

This cultural resources technical memorandum summarizes the existing conditions and describes potential effects on cultural resources associated with the Shadow Mountain Residential Project (Proposed Project). This study was conducted to comply with the California Environmental Quality Act. Shadow Mountain Community Church (SMCC) is located in the City of El Cajon, approximately one mile southeast of the Interstate 8 (I-8) and Greenfield Drive interchange. The approximately 54-acre Community Church complex is composed of east, west, and north campuses. Greenfield Drive divides the east and west campuses and the north campus is located on the north side of Madison Avenue. The topography of the east and north campuses is relatively flat, but the west campus is located on a prominent knoll west of Greenfield Drive. The proposed residential project has two components, one located on the north campus (2000 East Madison Avenue) and one located on the west campus (2075 East Madison Avenue) (Figure 1: Project Location). The Proposed Project is located within the unsectioned El Cajon Land Grant, Township 16S, Range 1E of the U.S. Geological Survey (USGS) 7.5-minute topographic map, El Cajon (USGS 1975; Figure 2: Project Vicinity).

Project Description

The project consists of a 23 lot residential subdivision located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The north campus will be subdivided into 11 single-family lots on a 3.58 acre parcel. The west campus will be subdivided into 12 single-family lots on a 4.48 acre parcel.

Sources Consulted

Summary of Methods and Results

This archaeological resources assessment focused on determining if any known/previously-recorded archaeological resources exist in the Proposed Project Area and the potential for unknown/previously-unrecorded archaeological resources within the Proposed Project Area. A records search, a review of the Sacred Lands Files maintained by the Native American Heritage Commission (NAHC), and Native American consultation were conducted for the Proposed Project.

Additionally, geological maps were reviewed to assess paleontological sensitivity. These efforts are described below.

Cultural Resources Literature and Records Search

Prior to the archaeological field investigation of the Proposed Project area, archaeologist Rachel Droessler conducted a cultural resources records search on June 26, 2017, at the South Coastal Information Center (SCIC) (Appendix A). The records search included a review of all available cultural resources surveys and excavation reports and site records within the current Proposed Project area and within a one-mile radius of the Proposed Project area. In addition, the National Register of Historic Places (National Park Service 2010) and documents and inventories from the California Office of Historic Preservation (COHP), including the lists of California Historical Landmarks (COHP 2010a), California Points of Historical Interest, (COHP 2010b) Listing of National Register Properties (COHPc), and the Inventory of Historic Structures (COHP 2010d) were consulted. Historic maps, including the El Cajon 1872, 1939, 1942, and 1955 quadrangle maps, were also examined.

Additionally, geological maps were examined to identify possible paleontologically-senstive areas. The entire Proposed Project is located within the Peninsular Ranges Region and the associated geological map unit is labeled "Kgt". This is an intrusive Tonalite from the Cretaceous period, which includes some granodiorite and quartz diorite that is severely weathered. This is not a sensitive geological formation for paleontological resources.

Results of the records search indicate that ten previously-recorded resources are located within one mile of the Proposed Project area and none are located within the Proposed Project area. Seven of the resources (CA-SDI-17355, CA-SDI-17356, CA-SDI-17357, CA-SDI-17358, CA-SDI-17359, CA-SDI-17360, CA-SDI-17361) are small, prehistoric bedrock milling feature sites with between two and four milling slicks each. Site CA-SDI-17356 also contains an associated mano and site CA-SDI-17357 has an associated Tizon Brownware body sherd. Site CA-SDI-7166 is a larger site containing a flaked stone lithic scatter (including tools), groundstone artifacts, faunal remains, hearth features, and multiple bedrock milling features. Site CA-SDI-5509 is a lithic scatter consisting of 30 flakes. The single previously-recorded historic site (CA-SDI-13139H) is the Suncrest Truck Trail, which is a dirt road with refuse deposited along the roadside dating from the 1940s to the present.

Table 1 contains a summary of sites located within a one-mile radius of the Proposed Project Area.

Table 1. Cultural Resources within a Mile Buffer

Primary	Trinomial	Period	Description
36-005509	SDI-5509	Prehistoric	Lithic scatter
36-007166	SDI-7166	Prehistoric	Bedrock milling and a pottery sherd
36-013139	SDI-13139	Historic	Suncrest Truck Trail
36-026421	SDI-17355	Prehistoric	Bedrock milling
36-026422	SDI-17356	Prehistoric	Bedrock milling

36-026423	SDI-17357	Prehistoric	Bedrock milling
36-026424	SDI-17358	Prehistoric	Bedrock milling
36-026425	SDI-17359	Prehistoric	Bedrock milling
36-026426	SDI-17360	Prehistoric	Bedrock milling
36-026427	SDI-17361	Prehistoric	Bedrock milling

A total of 44 studies have been conducted within a mile of the Proposed Project area with two completely covering and one intersecting the project area. Approximately 45 percent of the mile buffer has been covered by study areas. Table 2 contains a summary of surveys within the project area.

Table 2. Studies within the Project Area

NADB Number (Report Number)	Author	Year	Title
1128020 (SD-08020)	Pierson, Larry J.	2002	A Historical Evaluation Report For The Shadow Mountain Ministries Conceptual Master Plan
1128316 (SD-08316)	Pierson, Larry J.	2003	A Historical Evaluation Report For The Shadow Mountain Ministries Conceptual Master Plan City Of El Cajon.
1130256 (SD-010256)	Bonner, Wayne H. and Marnie Aislin-Kay	2006	Cultural Resource Records Search Site Visit Results for Cingular Telecommunications Facility Candidate SNDGCAO 794 (Bible College), 2075 "C" East Madison Avenue, El Cajon, San Diego County, California

Native American Outreach

A letter was sent to the NAHC on June 20, 2017 requesting a Sacred Lands File Search and list of potentially interested Native American Groups and Individuals. The NAHC responded on June 27, 2017 stating that a search of the sacred lands records files revealed no Sacred Lands or traditional cultural properties were identified in proximity to the Proposed Project area. The NAHC also provided a list of 21 Native American contacts in San Diego County who might have knowledge of cultural resources in the project area.

Based on this NAHC list, ICF sent outreach letters and maps of the Proposed Project area to the identified Native American groups on July 7, 2017. These letters included a description of the project area and maps indicating the project location. A letter was received on July 21, 2017 from the Viejas Band of Kumeyay Indians that stated that the Proposed Project area has cultural significance or ties to Viejas. They requested that a Kumeyaay Cultural Monitor be on site for ground disturbing activities. Native American outreach is ongoing and the Native American groups or individuals who

do not respond by letter, email, or phone call will be contacted by telephone within two weeks to confirm that they received the initial contact letter and to determine if they have any knowledge of cultural resources within the project vicinity. The complete record of Native American outreach correspondence is included in Appendix B.

The NAHC was also contacted for a list of tribes for AB52 and SB18 consultation on June 30, 2017 and a response was received on July 3, 2017. The government to government AB52 and SB18 consultation will be conducted by the City of El Cajon.

Field Methods

ICF archaeologist Rachel Droessler conducted a cultural resources pedestrian survey within the Proposed Project on June 21, 2017, using 10- to 15-meter transects. In the field, 7.5-minute USGS topographic maps and larger-scale aerial photographs were used, as well as a hand-held submeter global positioning system (GPS) unit loaded with shapefiles of the study area for orientation and to record resources and survey coverage.

The topography of the east and north campuses is relatively flat, but the west campus is located on a prominent knoll west of Greenfield Drive. The west campus had surface visibility ranging between 100% in the roads, to 5% visibility in the tall seasonal grasses. The ground has been completely disturbed by grading, as evidenced by push piles. Granite boulders were present at the bottom of the knoll, but have been moved from their original locations. A few pieces of modern tiles and clear glass along with modern irrigation pipes were observed. Nonnative ornamental trees and shrubs have been planted around the campus. Seasonal grasses and mustard are present throughout the survey area.

The east and north campuses are completely disturbed and are topographically flat. There is little vegetation as they are currently used for storage for trucks, bins, and other miscellaneous commercial machinery and parts. Both campuses are graded, level, dirt pads. Granite boulders have been moved into piles around the campuses. Seasonal grasses are present along the edges of the project area.

All granite boulders were surveyed for evidence of grinding which would be evidence of prehistoric food processing activity. No cultural resources were observed within the Proposed Project area.

Conclusion

The purpose of this study was to identify cultural resources located in the Proposed Project area. A cultural resources records search, a Native American Sacred Lands file search, Native American outreach, and a cultural resources field survey were conducted. Results of the records search indicate that no cultural resources were previously recorded within or adjacent to the Proposed Project area. A sacred lands file search conducted by the NAHC did not identify any reported sacred lands or traditional cultural resources within the Proposed Project area. One hundred percent of the Proposed Project area was surveyed for cultural resources, and ground visibility (averaging 70 to 100 percent) was excellent throughout the survey area. The entire Proposed Project area has been

completely disturbed. None of the land forms appear to be intact as the soil has been graded and padded over time. The survey did not identify any cultural resources in the Proposed Project area.

No further cultural resources work is recommended for the project.

There is always a possibility that buried cultural deposits could be preserved in the Proposed Project area beneath the current limits of disturbance. Further investigations may be needed if unanticipated cultural sites are encountered that cannot be avoided by the Proposed Project. If previously unidentified archaeological materials are found during the course of construction all work shall be halted within 60 feet of the discovery until a qualified archaeologist can assess the nature and significance of the find. Additional survey may be required if project plans change to include areas not previously surveyed for cultural resources.

If human remains are encountered during construction excavations, procedures shall be followed as specified in California State Health and Safety Code Section 8010 et seq., California State Health and Safety Code Section 7050.5 (b) and (c), California Public Resources Code Section 5097 et seq., and 25 U.S.C. Section 3001 et seq. The County Coroner shall be notified promptly upon discovery, and all work will stop in the vicinity of the remains until the Coroner has made a determination. If the Coroner determines that the remains are of Native American origin, the NAHC shall determine a Most Likely Descendant (MLD). As prescribed by law, the wishes of the MLD shall be heard and all reasonable efforts will be made to comply with the MLD's recommendations for the treatment or disposition, with proper dignity, of the human remains and any associated grave goods.

Sincerely,

Rachel Droessler

Rachel Droessler, M.A
Archaeologist

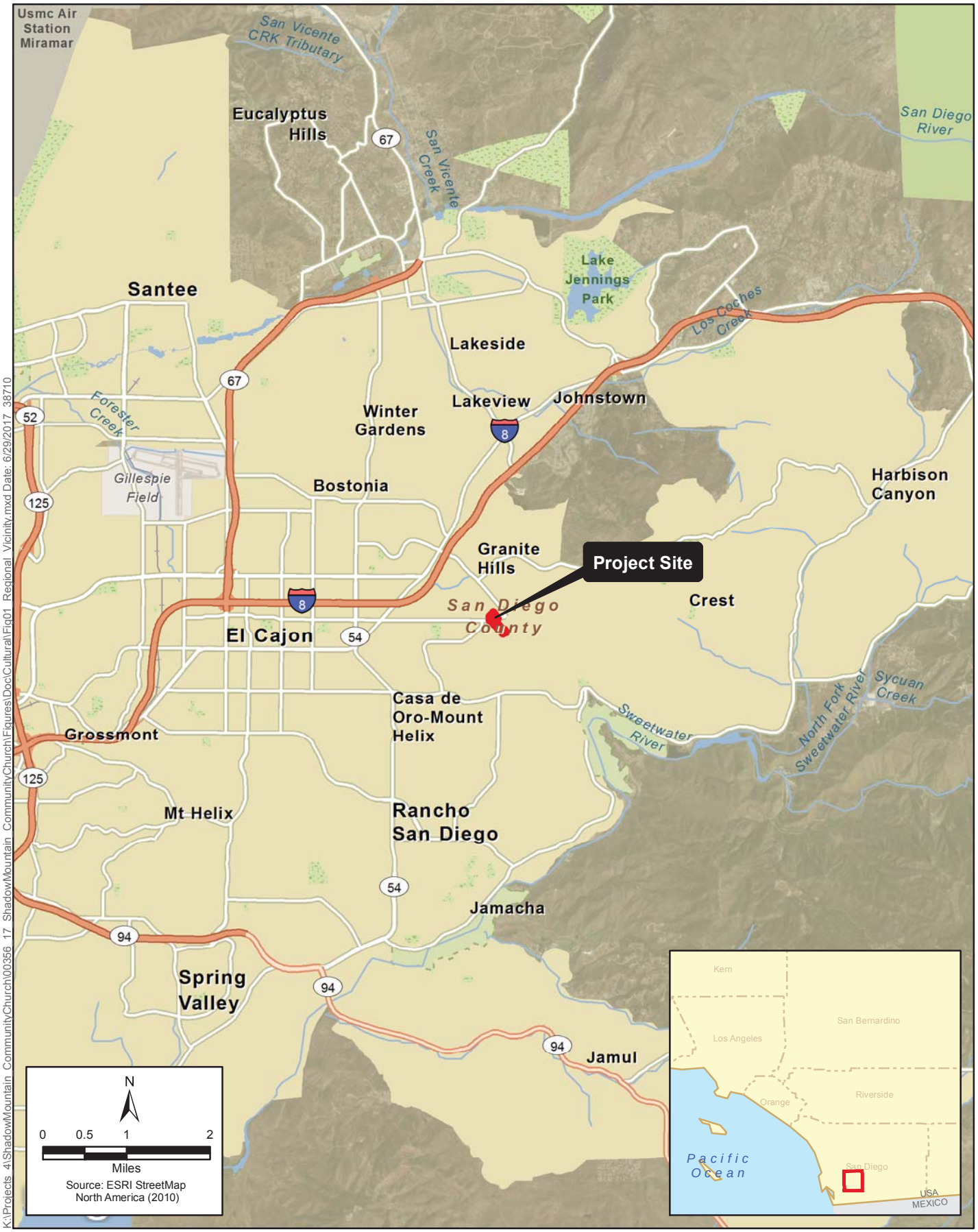
Attachments
Attachment A: Records Search Results
Attachment B: Native American Outreach Log

References

California Office of Historic Preservation
2010a. *California Historical Landmarks.* On file at the Eastern Information Center, University of California Riverside.
2010b. *California Points of Historical Interest.* On file at the Eastern Information Center, University of California Riverside.
2010c. *Listing of National Register Properties.* On file at the Eastern Information Center, University of California Riverside.
2010d *Inventory of Historic Structures.* On file at the Eastern Information Center, University of California Riverside.

National Park Service.
2010. *National Register of Historic Places*. https://www.nps.gov/nr/research/. Accessed May 2017.

United States Geological Survey
1975. *El Cajon* 7.5 Minute Quadrangle 1:24,000 Scale. United States Geological Survey, Washington D.C.



K:\Projects 4\ShadowMountain CommunityChurch\00356 17 ShadowMountain CommunityChurch\Figures\Doc\Cultural\Fig01 Regional Vicinity.mxd Date: 6/29/2017 38710

ICF

Figure 1
Study Vicinity
Shadow Mountain Community Church Residential Project

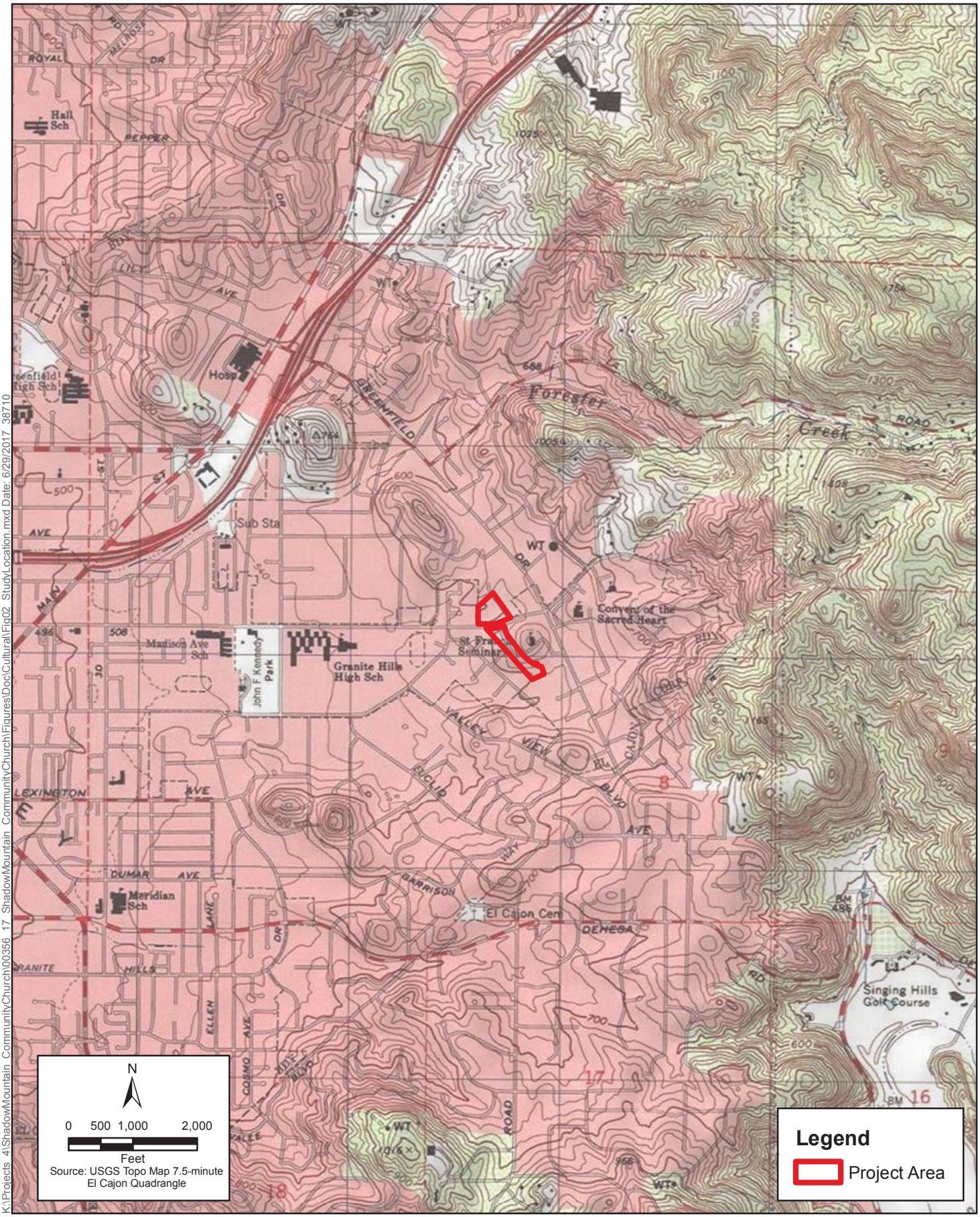


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Figure 2
Study Location
Shadow Mountain Community Church Residential Project

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Figure 3
Survey Coverage Map
Shadow Mountain Community Church Residential Project

Appendix A

Appendix B

Native American Outreach Contacts

Native American Group	Individual	Date of First Contact: Letter	Date of Second Contact: Phone call	Summary of Conversations
Barona Group of the Capitan Grande	Edwin Romero	7/5/2017		.
Jamul Indian Village	Erica Pinto	7/5/2017		
Campo Band of Mission Indians	Ralph Goff	7/5/2017		
Kwaaymii Laguna Band of Mission Indians	Carmen Lucas	7/5/2017		
Ewiiaapaayp Tribal Office	Robert Pinto	7/5/2017		
La Posta Band of Mission Indians	Gwendolyn Parada	7/5/2017		
Ewiiaapaayp Tribal Office	Michael Garcia	7/5/2017		
La Posta Band of Mission Indians	Javaughn Miller	7/5/2017		
Iipay Nation of Sana Ysabel	Virgil Perez	7/5/2017		
Manzanita Band of Kumeyaay Nation	Angela Elliott Santos	7/5/2017		
Inaja Band of Mission Indians	Rebecca Osuna	7/5/2017		
Mesa Grande Band of Mission Indians	Virgil Oyos	7/5/2017		
San Pasqual Band of Mission Indians	Allen E. Lawson	7/5/2017		
Sycuan Band of the Kumeyaay Nation	Cody J. Martinez	7/5/2017		
Viejas Band of Kumeyaay Indians	Robert J. Welch	7/5/2017		
Viejas Band of Kumeyaay Indians	Julie Hagen	7/5/2017		
Manzanita Band of Kumeyaay Nation	Nick Elliot	7/5/2017		

San Pasqual Band of Mission Indians	John Flores	7/5/2017			
Sycuan Band of the Kumeyaay Nation	Lisa Haws	7/5/2017			
Iipay Nation of Santa Ysabel	Clint Linton	7/5/2017			
Mesa Grande Band of Mission Indians	Mario Morales	7/5/2017			

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95501
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Shadow Mountain Community Church

County: San Diego

USGS Quadrangle

Name: El Cajon, CA

Township: South Range: East Section(s): 8

Company/Firm/Agency:

ICF

Contact Person: Rachel Droessler

Street Address: 525 B Street, Suite 1700

City: San Diego Zip: 92101

Phone: (858) 444-3947 Extension:

Fax: (858) 578-0573

Email: rachel.droessler@icf.com

Project Description:

The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. See attached figure.

☑ Project Location Map is attached

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

June 27, 2017

Rachel Droessler
ICF

Sent by E-mail: Rachel.droessler@icf.com

RE: Proposed Shadow Mountain Community Church Project, Community of Granite Hills; El Cajon USGS Quadrangle, San Diego County, California

Dear Ms. Droessler:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent of the reference codes below is to avoid or mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects under AB-52.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 **require public agencies** to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

> **Within 14 days** of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
   - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A search of the SFL was completed for the project with negative results.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

Native American Heritage Commission
Native American Contact List
San Diego County
6/27/2017

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road — Kumeyaay
Lakeside, CA, 92040
Phone: (619) 443 - 6612
Fax: (619) 443-0681
clloyd@barona-nsn.gov

Campo Band of Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Kumeyaay
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Tribal Office
Michael Garcia, Vice Chairperson
4054 Willows Road — Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
michaelg@leaningrock.net

Ewiiaapaayp Tribal Office
Robert Pinto, Chairperson
4054 Willows Road — Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507 — Kumeyaay
Santa Ysabel, CA, 92070
Phone: (760) 803 - 5694
cjlinton73@aol.com

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130 — Kumeyaay
Santa Ysabel, CA, 92070
Phone: (760) 765 - 0845
Fax: (760) 765-0320

Inaja Band of Mission Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd. — Kumeyaay
Escondido, CA, 92025
Phone: (760) 737 - 7628
Fax: (760) 747-8568

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 — Kumeyaay
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas,
P.O. Box 775 — Kumeyaay
Pine Valley, CA, 91962
Phone: (619)709-4207

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Kumeyaay
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road — Kumeyaay
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Shadow Mountain Community Church Project, San Diego County.

Native American Heritage Commission
Native American Contact List
San Diego County
6/27/2017

Manzanita Band of Kumeyaay Nation
Nick Elliott, Cultural Resources Coordinator
P. O. Box 1302 Kumeyaay
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957
nickmepa@yahoo.com

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 Kumeyaay
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

Mesa Grande Band of Mission Indians
Virgil Oyos, Chairperson
P.O Box 270 Kumeyaay
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

Mesa Grande Band of Mission Indians
Mario Morales, Cultural Resources Representative
PMB 366 35008 Pala Temecula Rd. Kumeyaay
Pala, CA, 92059
Phone: (760) 622 - 1336

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
P.O. Box 365 Kumeyaay
Valley Center, CA, 92082
Phone: (760)749-3200
Fax: (760)749-3876
allenl@sanpasqualtribe.org

San Pasqual Band of Mission Indians
John Flores, Environmental Coordinator
P. O. Box 365 Kumeyaay
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org

Sycuan Band of the Kumeyaay Nation
Lisa Haws, Cultural Resources Manager
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619) 312 - 1935

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court Kumeyaay
El Cajon, CA, 92019
Phone: (619)445-2613
Fax: (619)445-1927
ssilva@sycuan-nsn.gov

Viejas Band of Kumeyaay Indians
Robert Welch, Chairperson
1 Viejas Grade Road Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov

Viejas Band of Kumeyaay Indians
Julie Hagen,
1 Viejas Grade Road Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Shadow Mountain Community Church Project, San Diego County.

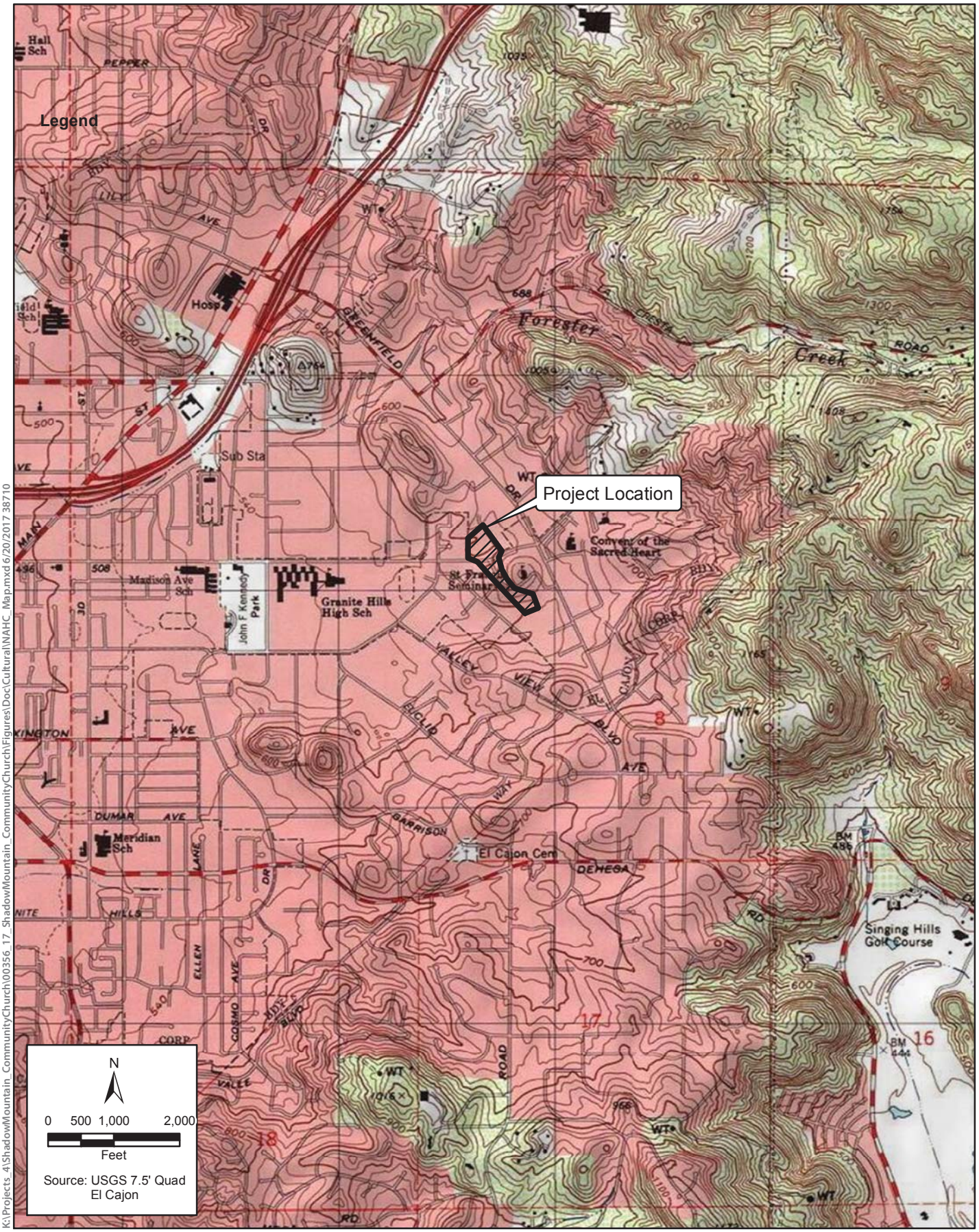

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Figure 1
NAHC Sacred Lands File Search
Shadow Mountain Community Church

June 30, 2017

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302
Boulevard, CA 91905

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Ms. Elliott Santos:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

ICF has been retained to prepare the Initial Study/Mitigated Negative Declaration (IS/MND) Report for the proposed Shadow Mountain Community Church project which involved a record search and pedestrian survey. A pedestrian archaeological survey of the property was conducted, and no cultural resources were identified. The property has been fully graded and developed for church grounds and the existing residence.

A records search completed by ICF staff at the South Coastal Information Center (SCIC) in June 2017 indicated that no prehistoric archaeological sites have been previously recorded within or adjacent to the project area. The Native America Heritage Commission completed a search of the Sacred Lands File which failed to indicate the presence of Native American cultural resources in the area. . The NAHC also identify you as a person who may have concerns or knowledge of cultural resources in the project area. Any information you might be able to share about the Project Area would greatly enhance the study and would be most appreciated. This consultation is part of ICF's due diligence and not part of AB52 consultation process.

If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our report. As required by State law, all site data and other culturally

sensitive information will not be released to the general public and will be kept strictly confidential. I can be reached at 858 444-3966, or by email at Rachel.droessler@icf.com.

Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Manzanita Band of Kumeyaay Nation
Nick Elliot, Cultural Resources Coordinator
P.O. Box 1302
Boulevard, CA 91905

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Elliott:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

San Pasqual Band of Mission Indians
John Flores, Environmental Coordinator
P.O. Box 365
Valley Center, CA 92082

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Flores:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Ewiiaapaayp Tribal Office
Michael Garcia, Vice Chairperson
4054 Willows Road
Alpine, CA 91901

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Garcia:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Campo Band of Mission Indians
Ralph Goff, Chairperson
36190 Church Road Suite 1
Campo, CA 91906

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Goff:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Viejas Band of Kumeyaay Indians
Julie Hagen
1 Viejas Grade Road
Alpine, CA 91901

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Ms. Hagen:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Sycuan Band of the Kumeyaay Nation
Lisa Haws, Cultural Resources Manager
1 Kwaaypaay Court
El Cajon, CA 92019

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Ms. Haws:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
P.O. Box 365
Valley Center, CA 92082

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Lawson:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Iipay Nation of Santa Ysabel
Clint Linton, Director of Cultural Resources
P.O. Box 507
Santa Ysabel, CA 92070

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Linton:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775
Pine Valley, CA 91962

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Ms. Lucas:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court
El Cajon, CA 92019

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Martinez:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

La Posta Band of Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road
Boulevard, CA 91905

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Miller:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Mesa Grande Band of Mission Indians
Mario Morales, Cultural Resources Representative
PMB 366 35008 Pala Temecula Rd.
Pala, CA 92059

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Morales:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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If you have any recommendations regarding the Project, please address them to me so that I can incorporate them into our report. As required by State law, all site data and other culturally

sensitive information will not be released to the general public and will be kept strictly confidential. I can be reached at 858 444-3966, or by email at Rachel.droessler@icf.com.

Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Inaja Band of Mission Indians
Rebecca Osuna, Chairperson
2005 S. Escondido Blvd.
Escondido, CA 92025

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Ms. Osuna:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Mesa Grande Band of Mission Indians
Virgil Oyos, Chairperson
P.O. Box 270
Santa Ysabel, CA 92070

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Oyos:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road
Boulevard, CA 91905

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Ms. Parada:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Iipay Nation of Santa Ysabel
Virgil Perez, Chairperson
P.O. Box 130
Santa Ysabel, CA 92070

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Perez:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Ewiiaapaayp Tribal Office
Robert Pinto, Chairperson
4054 Willows Road
Alpine, CA 91901

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Pinto:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612
Jamul, CA 91935

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Ms. Pinto:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Barona Group of the Capitan Grande
Edwin Romero, Chairperson
1095 Barona Road
Lakeside, CA 92040

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Romero:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

June 30, 2017

Viejas Band of Kumeyaay Indians
Robert J. Welch, Chairperson
1 Viejas Grade Road
Alpine, CA 91901

Subject: Shadow Mountain Community Church Project, San Diego County

Dear Mr. Welch:

I'm writing to inform you that the Shadow Mountain Community Church is proposing to subdivide two parcels for the construction of single family residential lots. The proposed project includes a residential subdivison located on the north campus and a residential subdivision located on the west campus of the Shadow Mountain Community Church. The proposed subdivisions are on a 3.58 acre parcel (11 single family residential lots) and 4.48 acre parcel (12 single-family residential lots respectively. The parcels are currently in use as a residential single-family residence and church grounds. The project area is located at 2000 Madison Avenue and 2075 Madison Avenue west of Greenfield Drive in the City of El Cajon, San Diego County, California 92020. The project area is delineated on the attached maps and is located within Township 16 South, Range 1 East, Section 8 of the *El Cajon, California*, U.S. Geological Survey (USGS) 7.5-minute topographic map quadrangle.

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Sincerely,

Rachel Droessler, MA
Archaeologist

Encl. Figure 1 –Project Location

VIEJAS
TRIBAL GOVERNMENT

P.O Box 908
Alpine, CA 91903
#1 Viejas Grade Road
Alpine, CA 91901

Phone: 6194453810
Fax: 6194455337
viejas.com

July 11, 2017

Rachel Droessler
Archaeologist
ICF
525 B Street, Suite 1700
San Diego, CA 92101

RE: Shadow Mountain Community Church Project

Dear Ms. Droessler,

The Viejas Band of Kumeyaay Indians ("Viejas") has reviewed the proposed project and at this time we have determined that the project site has cultural significance or ties to Viejas.

Viejas Band request that a Kumeyaay Cultural Monitor be on site for ground disturbing activities to inform us of any new developments such as inadvertent discovery of cultural artifacts, cremation sites, or human remains.

Please call me at 619-659-2312 or Ernest Pingleton at 619-659-2314 or email, rteran@viejas-nsn.gov or epingleton@viejas-nsn.gov , for scheduling. Thank you.

Sincerely,

Ray Teran, Resource Management
VIEJAS BAND OF KUMEYAAY INDIANS

Appendix D

Transportation and Circulation Memorandum

Darnell & ASSOCIATES, INC.

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

October 31, 2017

Mr. Trev Holman
Shadow Mountain Community Church
2100 Greenfield Drive
El Cajon, CA. 921019

D&A Ref. No: 170502

Subject: Revised Focused Traffic Analysis for the 23 Lot Subdivisions for 2000 and 2075 East Madison Avenue, El Cajon California.

Dear Mr. Holman:

In accordance with your authorization, Darnell & Associates, Inc. (D&A) has prepared this Revised Traffic Impact Report for the development of the proposed 23 lot subdivision located at 2000 East Madison Avenue and 2075 East Madison Avenue west of Greenfield Drive in the City of El Cajon. Figure 1 is a Vicinity Map showing the general location of project. Figure 2 presents lots 1 thru 11 at 2000 East Madison Avenue located on the southside of Madison Avenue. It should be noted Lot 1 is an existing home and lots 1 and 2 take direct access to East Madison Avenue. Figure 3 presents lots 12 thru 23 at 2075 East Madison Avenue located on the northside of Madison Avenue Lots 3 to 4 will also take direct access to Madison Avenue.

The focused traffic analysis presented in this Letter Report encompasses the following areas:

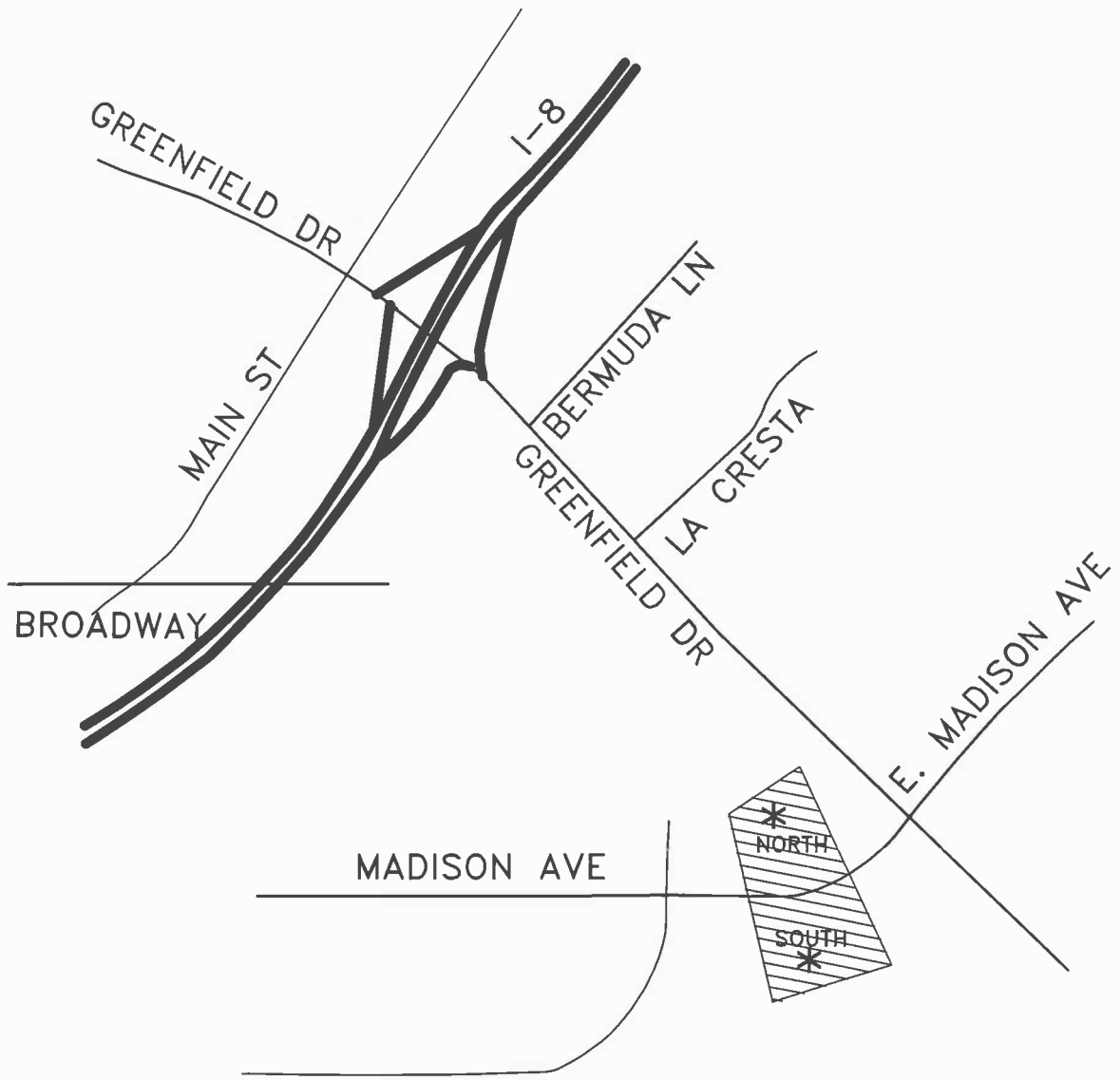
- Project Description;
- Study Area;
- Significance and Methodology;
- Existing Conditions;
- Project Traffic;
- Project Impacts; and
- Findings and Conclusions.

PROJECT DESCRIPTION

The project proposes the development of 23 residential properties. Eleven (11) dwelling units are proposed at 2000 East Madison Avenue on the northside of East Madison Avenue and twelve (12) dwelling units are proposed at 2075 East Madison Avenue on the southside of East Madison Avenue. Figure 2 presents the Composite Tract Map. Figure 3 presents the Tentative Tract Map for 2000 East Madison Avenue and Figure 4 presents the Tentative Tract Map for 2075 East Madison Avenue.

STUDY AREA

Based on our discussions with the City of El Cajon Traffic Engineer, the Traffic Study is focused on East Madison Avenue west of Greenfield Drive and Greenfield Drive north and south of East Madison Avenue. The AM/PM operations at the East Madison Avenue/Greenfield Drive intersection were also analyzed.

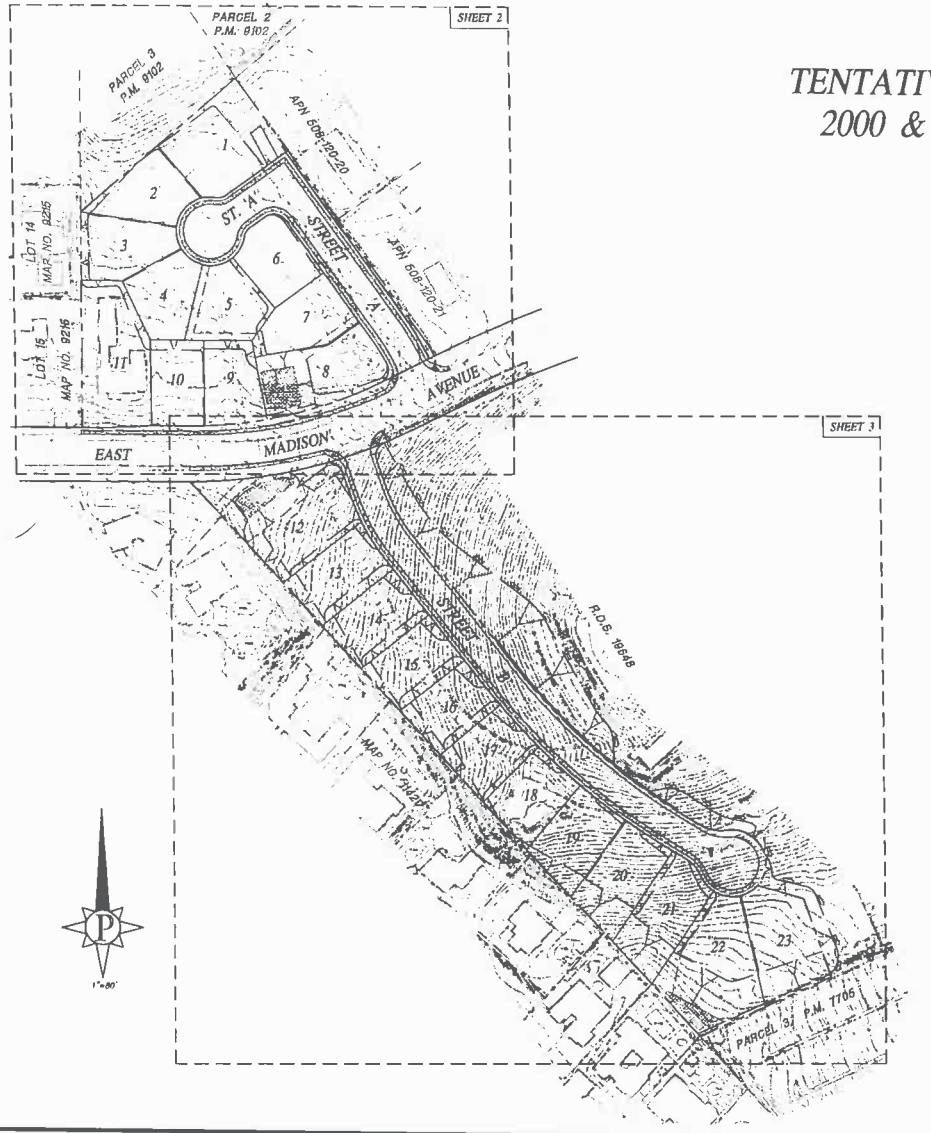


LEGEND

N* – PROJECT SITE, NORTH CAMPUS

S* – PROJECT SITE, SOUTH CAMPUS

Darnell & ASSOCIATES, INC.	FIGURE 1
170502-aa.dwg 11-02-17 VLA	VICINITY MAP



TENTATIVE SUBDIVISION MAP NO. ____
2000 & 2075 EAST MADISON AVENUE

Darnell & ASSOCIATES, INC.
170502-aa.dwg 11-03-17 VLA

FIGURE 2
TENTATIVE SUBDIVISION MAP NO.
2000 & 2075 E. MADISON AVENUE

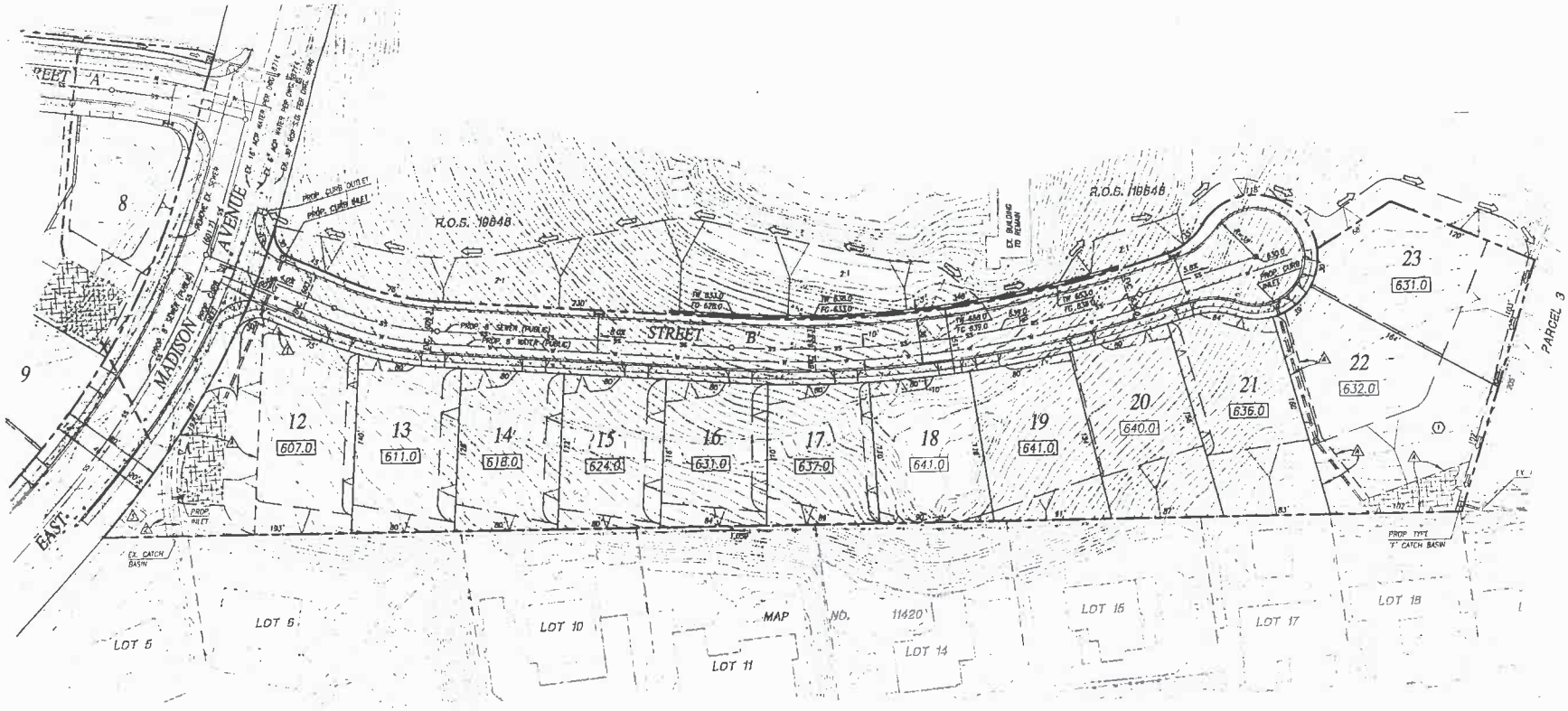
Darnell & ASSOCIATES, INC.

170502-aa.dwg 11-03-17 VLA

FIGURE 3

COMPOSITE SITE PLAN

FOR 2000 E. MADISON AVENUE LOTS 1 THRU 11



Darnell & ASSOCIATES, INC.
170502-aa.dwg 11-03-17 VLA

FIGURE 4
COMPOSITE SITE PLAN
FOR 2075 E. MADISON AVENUE LOTS 12 THRU 23

SIGNIFICANCE AND METHODOLOGY

Significance Criteria

The City of El Cajon has established LOS "D" as the minimum acceptable operating condition. The City of El Cajon follows the SANTEC/ITE Guidelines to determine whether or not traffic impacts on its roadway network system are considered "significant" with the exception that LOS "D" is considered acceptable. According to the SANTEC/ITE guidelines, a project is considered to have a significant impact if new project traffic decreases the operations of surrounding roadways by a defined threshold. The defined thresholds for roadway segments and intersections are shown in Table 1.

Table 1 - City of El Cajon Traffic Impact Significant Thresholds

Level of Service with Project[a]	Allowable Increase Due to Project Impacts[b]					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	*V/C*	Speed (mph)	Delay (sec.)	Delay (sec.)
E&F *(or ramp meter delays above 15 minutes)*	0.01	1	0.02	1	2	2

[a]All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table 2 or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive,

[b] If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are deemed to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigations (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note a above), or if the project adds a significant amount of peak hour trips to cause any traffic queues to exceed on or off ramp storage capacities, the project applicant shall be responsible for mitigating significant impact changes. V/C = Volume to Capacity Ratio, Speed = Arterial speed measured in miles per hour, LOS = Level of Service, Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for rampmeters.

Level of Service

Level of Service (LOS) is a professional industry standard by which to measure the operating conditions of a given roadway segment or intersection. Level of Service is defined on a scale of A to F, where LOS "A" represents free flowing traffic conditions with no restrictions on maneuvering or operating speeds, low traffic volumes and high speeds; LOS "B" represents stable flow, more restrictions, operating speeds beginning to be affected by traffic volumes; LOS "C" represents stable flow, more restrictions, speed and maneuverability more closely controlled by higher traffic volumes; LOS "D" represents conditions approaching unstable flow, traffic volumes profoundly affect arterial flow; LOS "E" represents unstable flow, and some stoppages; and LOS "F" represents forced flow, many stoppages, and low operating speeds. Table 2 shows the volume to capacity (v/c) ratio, delay, and density ranges that are equivalent to each Level of Service (LOS). The City of El Cajon strives to have all roadway segments and intersections operate at LOS "D" or better.

Table 2 - Level of Service Ranges

Intersections		
LOS	Signalized Intersections - Delay (Seconds/Vehicle)[1]	Unsignalized Intersections - Delay (Seconds/Vehicle)[1]
A	Less Than or Equal to 10.0	Less Than or Equal to 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	Greater than 80.0	Greater than 50.0

Roadway Segments		
	Daily	Peak Hour[3]
LOS	Volume to Capacity Ratio (v/c) [2]	Two-Lane Highways Avg Travel Speed (mph)
A	< 0.12	Greater Than 55
B	0.13 to 0.25	Greater Than 50 to 55
C	0.26 to 0.44	Greater Than 45 to 50
D	0.45 to 0.67	Greater than 40 to 45
E	0.68 to 1.00	Less Than or Equal to 40.
F	> 1.00	Flow Rate Exceeds Segment Capacity

[1] The delay ranges shown are based on the 2000 Highway Capacity Manual (HCM) [2] The volume to capacity ratios are based on the County of San Diego Circulation Element of a Light Collector, actual Levels of Service are determined by average daily vehicle trips (ADT) and not v/c ratio. [3] The average speeds and density ranges shown are based on the 2000 HCM. For two-lane highways, peak hour level of service is based on the average travel speed. For multi-lane highways, density is the primary determinant of the LOS, mph = miles per hour; pc/mi/ln = passenger cars per mile per lane

ANALYSIS METHODOLOGY

Roadways

The roadway segment daily LOS was determined by comparing the traffic volumes under all traffic conditions to the capacity of the roadway according to its roadway cross-section and classification. Table 3 summarizes the function and recommended capacity for each roadway classification. For the purpose of this report, the daily traffic volumes of the roadway segments in the vicinity of the project were compared to the recommended capacity, based on its classification to determine the segments level of service. The daily (24 hour) traffic count sheets are included in Appendix A.

Table 3 - Roadway Circulation Element Classification

Circulation Element Classification	Function	No. of Lanes	LOS "D" Recommended Capacity[a]	LOS "E" Recommended Capacity[a]
Primary Thoroughfare	Serves as a link between a freeway and subordinate streets, or as a link between two freeways. Restricted access with raised Median and left turn pockets.	6ld	50,000 ADT	57,000 ADT
		4ld	33,400 ADT	37,000 ADT
		4lp	33,400 ADT	37,000 ADT
		4l	30,800 ADT	34,200 ADT
		2lp	13,500 ADT	19,000 ADT
Secondary Thoroughfare	Carry traffic from subordinate streets to major destination point within the community. Operates with lower design speeds than the primary thoroughfare.	4lp	33,400 ADT	37,000 ADT
		4l	30,800 ADT	34,000 ADT
		2l	10,900 ADT	16,200 ADT
Collector Street	Serves as a link between the neighborhood service street and the thoroughfare.	2lp	13,500 ADT	19,000 ADT
		2l	10,900 ADT	16,200 ADT
Street	Provide direct access to residential structures. They are not intended to serve through traffic.	2l	Less Than 4,500 ADT[b]	Less Than 4,500 ADT[b]

[a] Capacities are based on the recommended maximum average daily traffic (ADT) carried in order for the roadway to operate at LOS D or better.
[b] Levels of Service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. The capacity shown here is the recommended capacity for LOS C; 6ld = Six-Lane Roadway with a Raised Center Median; 4ld = Four-Lane Roadway with a Raised Center Median; 4lp = Four-Lane Roadway with a Painted Median or a Center Two-Way Left Turn Lane; 4l = Four-Lane Undivided Roadway; 2lp = Two-Lane Roadway with a Painted Median or a Center Two-Way Left Turn Lane; 2l = Two-Lane Undivided Roadway.

Intersections

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 16 of the *2000 Highway Capacity Manual (HCM),* with the assistance of the *Synchro* (version 9) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS).

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and Levels of Service (LOS) was determined based upon the procedures found in Chapter 17 of the *2000 Highway Capacity Manual (HCM),* with the assistance of the *Synchro* (version 9) computer software.

EXISTING CONDITIONS

This section of the focused traffic study is intended to discuss the existing conditions of the roadways and intersections within the vicinity of the project to determine travel flow and/or delay difficulties, if any, that exist prior to adding the traffic generated by the proposed project. The existing conditions analysis establishes a base condition which is used to assess the projects impacts.

Darnell & Associates, Inc. (D&A) conducted a field review of the area surrounding the project in May 2017. The existing roadway geometrics are illustrated in Figure 5.

Existing Roadway Characteristics

The key segments analyzed in the study area are identified below:

Greenfield Drive (SA 900/SC 2031), from East Madison Avenue to the south, is 64' feet wide with bike and parking lanes, a single lane in each direction with a center two-way left turn lane with a LOS "E" capacity of 19,000. North of Greenfield Drive is identified as a County Circulation Element Road and is therefore, under the County's jurisdiction. This segment is a 46' foot wide two-lane road with a LOS "E" capacity of 19,000 ADT.

Madison Avenue (SC1960) is a 46' foot wide east\west two-lane Circulation Element road that intersects with Granite Hills Drive, and Greenfield Drive. At the intersection with Granite Hills Drive, East Madison Avenue widens briefly to a three-lane road, with two westbound lanes to accommodate merging traffic at the intersection. Within the study area East Madison Avenue is under the jurisdiction of the City of El Cajon and "is classified" in the City of El Cajon Circulation Element is classified as a Secondary Thoroughfare west of Greenfield Drive with a LOS "E" capacity of 16,200 ADT.

Roadway Segment Daily Traffic

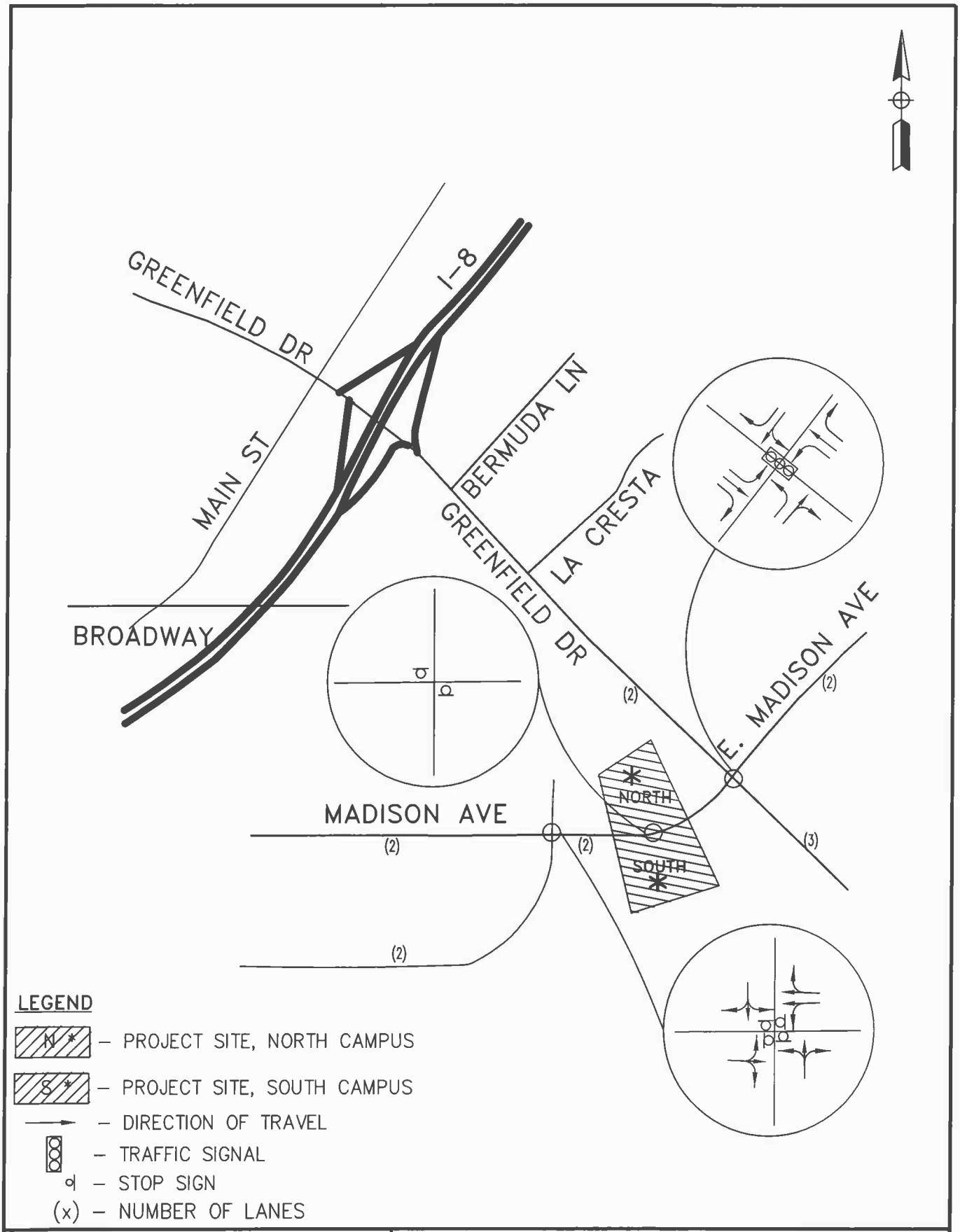
Twenty-four (24) hour count data was collected on May 17, 2017 for the segments of Greenfield Drive north of East Madison Avenue. The segments of East Madison Avenue, Granite Hills Drive and Greenfield Drive, was collected on June 22, 2016 and October 13, 2016 south of East Madison Avenue. Count summaries are included in Appendix A.

Key Intersections

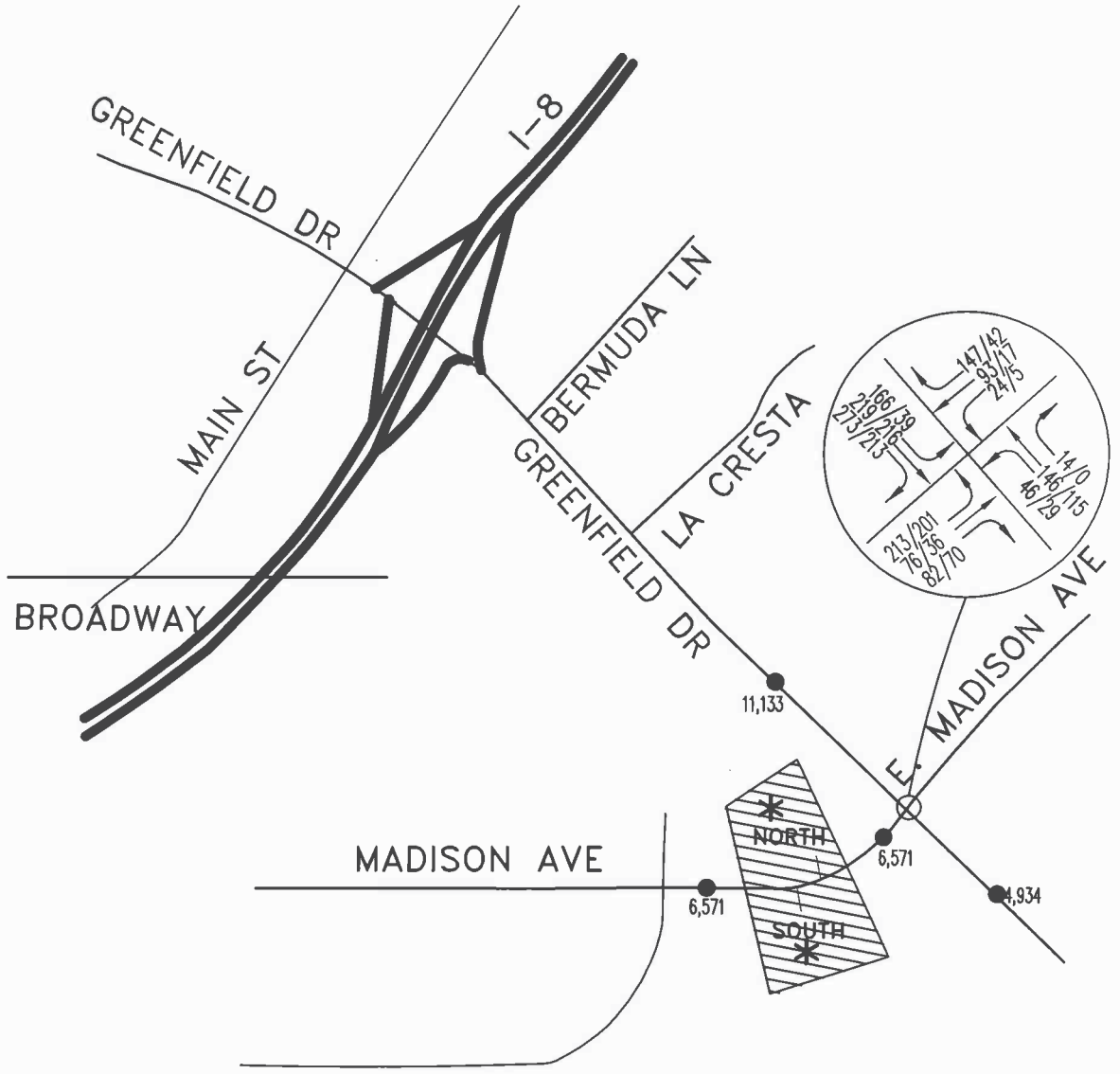
Figure 5 provides intersection configurations and traffic control for the key intersections. The key intersection analyzed was Greenfield Drive/East Madison Avenue, which is signalized.

Intersection Traffic Counts

Morning and afternoon peak hour traffic counts were collected at the East Madison Avenue/Greenfield intersection on May 17, 2017. Count summary sheets can be found in Appendix A. Figure 5 illustrates the existing conditions on the roadways and Figure 6 illustrates the existing traffic volumes of the roadways and intersections in the vicinity of the project. A copy of the turn counts can be found in Appendix A.



Darnell & ASSOCIATES, INC.	FIGURE 5
170502-aa.dwg 11-02-17 VLA	EXISTING CONDITIONS



LEGEND

N * – PROJECT SITE, NORTH CAMPUS

S * – PROJECT SITE, SOUTH CAMPUS

→ – DIRECTION OF TRAVEL

● Z,ZZZ– DAILY TRAFFIC VOLUME

xx/yy – AM/PM PEAK HOUR TURN VOLUMES

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FIGURE 6
EXISTING TRAFFIC VOLUMES

Existing Conditions Level of Service

Tables 4 and 5 present the existing roadway and intersection levels of service. Table 4 presents the roadways and Table 5 presents the intersection levels of service.

Review of Table 4 shows Madison Avenue and Greenfield Drive south of Madison Avenue operates at LOS C or better and Greenfield Drive north of Madison Avenue operates at LOS "E".

Review of Table 5 shows the Madison Avenue/Greenfield Drive intersection operates at LOS "C" for the AM and PM peak hour conditions.

Table 4 - Existing Roadway Segment Level of Service

Roadway Segment	Classification	Capacity	Existing		
			A.D.T.	v/c	LOS
Greenfield Drive					
- North of East Madison Avenue.	2l-S	16,200	**11,133**	**0.69**	**E**
- South of East Madison Avenue	2lp-C	19,000	4,934	0.26	B
East Madison Avenue					
- East of Granite Hills Drive	2l-S	16,200	6,571	0.41	C
- West of Greenfield Drive	2l-S	16,200	6,571	0.41	C

A.D.T. = Average Daily Traffic Volume; v/c = Volume to Capacity Ratio; LOS = Level of Service Capacity = Upper Limit of Level of Service E based on the segments roadway classification, Δ v/c = Change in volume to capacity ratio as compared to without project conditions; Significance is based on the SANTEC/ITE Guidelines, 2lp-C = Two-Lane Collector Street With a Painted Median; 2l-S = Two- Lane Undivided Secondary Thoroughfare.

Table 5 - Existing + Intersection Level of Service

Intersection	Traffic Control	Existing			
		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
Greenfield Dr. @ East Madison Avenue	Signalized	32.5	C	26.9	C
Greenfield Dr.@ Project Driveway	TWSC	DNE			

(a) Delays are reported as the average control delay for the entire intersection at signalized intersections and the worst movement at unsignalized intersections. Delay is measured in seconds per vehicle; LOS = Level of Service per the 2000 HCM; TWSC = Two way Stop control, DNE = Does Not Exist
Δ Delay = Change in delay (in seconds per vehicle) as compared to without project condition using Synchro 8

PROJECT TRAFFIC

Trip Generation

The trip generation potential for a project is estimated based on the land use characteristics. The San Diego Association of Governments' (SANDAG) publishes trip generation rates for common land uses in the San Diego Region, in their document called the *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.

Table 6 provides a summary of the daily and peak hour trip generation rates utilized within this study. All trip generation rates illustrated in Table 6 were reviewed and approved by the Traffic Engineering Staff at the City of El Cajon.

Table 6 - Project Trip Generation Trip (A)

Trip Generation Rates

Land Use	Daily Trip Rate	AM Peak Hour			PM Peak Hour		
		Total % of Daily	%In	%Out	Total % of Daily	%In	%Out
RESIDENTIAL	10/DU	8%	30%	70%	10%	70%	30%

Trip Generation

Land Use	Daily	AM Peak			PM Peak		
		Total	In	Out	Total	In	Out
11 Dwelling Units	110	9	3	6	11	8	3
12 Dwelling Units	120	10	3	7	12	6	4
Total:	**230**	**19**	**6**	**13**	**23**	**16**	**7**

DU = Dwelling Units
(A) Trip Generation rate are based SANDAG published trip generation rates.

Trip Distribution and Assignment

Project traffic presented on Table 6 was then assigned to the study area and the East Madison Avenue/ Greenfield Drive intersection. Figure 7 presents the project trip distribution, percentages and the resulting project daily and peak hour traffic volumes.

PROJECT IMPACTS

This section of the report analyzes the projects impacts on the study area roadways and intersections. Project traffic presented on Figure 7 was added to existing Traffic volumes presented on Figure 6. The resulting Existing Plus Project Traffic Volumes are presented on Figure 8.

Roadway Segments

The daily traffic data presented on Figure 8 was analyzed and the results are presented on Table 7. Review of Table 7 shows East Madison Avenue and Greenfield Drive south of East Madison Avenue operate at LOS "C" or better for existing condition and continue to operate at LOS"C' or better with the addition of project traffic. Review of Table 7 identifies Greenfield Drive to operate at LOS "E" for existing condition and will continue to operate at LOS "E" with the addition of project traffic.

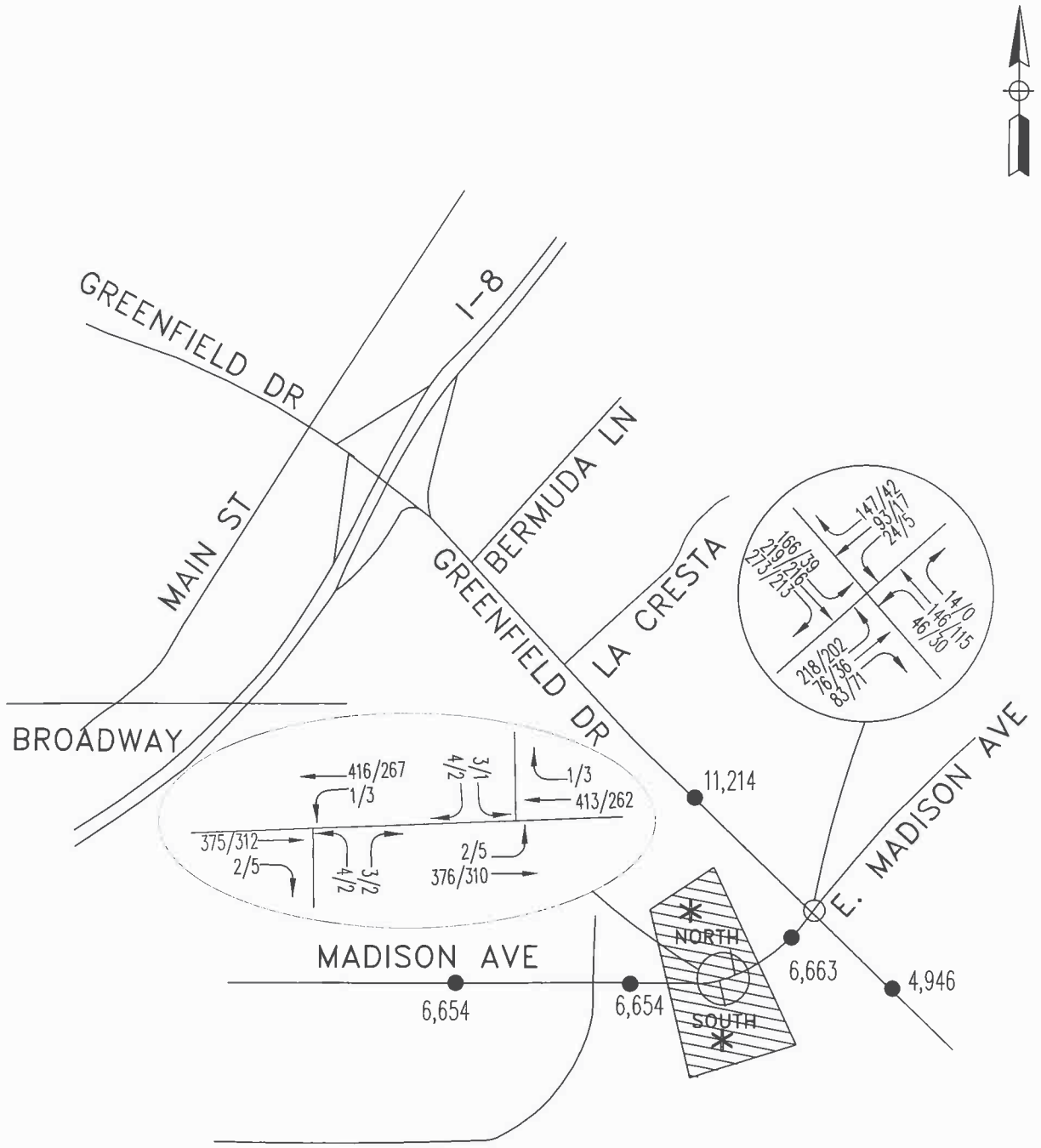
Further review of Table 7 shows the project does not create any significant direct project impacts. Greenfield Drive north of East Madison Avenue operates at LOS "E" without project traffic and continues to operate at LOS "E" with the project resulting in no increase in the existing plus project V/C ratio. The project is considered to not have any direct impacts to Greenfield Drive since the addition of project traffic does not exceed the City of El Cajon's allowable increase in volume/capacity ratio of 0.02 shown in Table 1.

Intersections

Intersection operation results for the Existing and Existing Plus Project conditions are presented on Table 8 Review of Table 8 shows Greenfield Drive/East Madison Avenue and the East Madison Avenue/ Project Access intersections to operate at LOS "C" or better. Therefore, the project is not considered to have any significant intersection impacts.

The East Madison Avenue Project intersection has been analyzed based on the installation of stop sign controls entering East Madison Avenue. The stop sign controls are recommended to control project vehicles entering East Madison Avenue.

To further document the project does not have a significant impact; we reviewed the project impacts to Greenfield Drive north of East Madison Avenue, based on the County of San Diego Measures of Significant Impacts and Allowable increase on Congested Roads. Table 9 was prepared showing the County of San Diego criteria. Review of Table 9 shows the project does not have a significant impact on Greenfield Drive north of Madison Avenue. A copy of the San Diego County Criteria is included in Appendix C.



LEGEND

- N* – PROJECT SITE, NORTH CAMPUS
- S* – PROJECT SITE, SOUTH CAMPUS
- → – DIRECTION OF TRAVEL
- ● Z,ZZZ – DAILY TRAFFIC VOLUME
- xx/yy – AM/PM PEAK HOUR TURN VOLUMES

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FIGURE 8

EXISTING PLUS PROJECT TRAFFIC VOLUMES

Table 7 - Existing + Project Roadway Segment Level of Service

Roadway Segment	Class.	Capacity	Existing Conditions			Existing + Project Conditions						Sign.
			A.D.T	V/C	LOS	Project Traffic	A.D.T	V/C Ratio	LOS	V/C	Δ V/C	
Greenfield Drive												
- North of East Madison Avenue	2l-S	16,200	**11,133**	**0.69**	**E**	**81**	**11,214**	**0.737**	**E**	**0.69**	**0.0**	NO
- South of - East Madison Avenue	2lp-S	19,000	4,934	0.26	C	12	4,946	0.275	B	0.26	0.0	NO
East Madison Avenue												
- East of Granite Hills Drive	2l-S	16,200	6,571	0.41	C	83	6,654	0.510	C	0.41	0.0	NO
- West of Greenfield Drive	2l-S	16,200	6,571	0.41	C	92	6,654	0.249	C	0.41	0.0	NO

A.D.T. = Average Daily Traffic Volume; LOS = Level of Service; v/c = Volume to Capacity Ratio; Capacity = Upper Limit of Level of Service E based on the segments roadway classification, Δ v/c = Change in volume to capacity ratio as compared to without project conditions; Significance is based on the SANTEC/ITE Guidelines, 2lp-C = Two-Lane Collector Street With a Painted Median; 2l-S = Two-Lane Undivided Secondary Thoroughfare.

Table 8 - Existing + Project Intersection Segment Level of Service

Intersection	Traffic Control	Existing Conditions				Existing + Project Conditions						Impact
		AM Peak		PM Peak		AM Peak			PM Peak			
		Delay	LOS	Delay	LOS	Delay	LOS	Delay Δ	Delay	LOS	Delay Δ	
Greenfield Dr. @ East Madison Avenue	Signalized	32.5	C	26.9	C	32.7	C	0.2	27.0	C	0.1	NO
Greenfield Dr. @ Project Access	OWSC	DNE				32.4	C	0.8	30.0	C	0.5	NO

(a) Delays are reported as the average control delay for the entire intersection at signalized intersections and the worst movement at unsignalized intersections. Delay is measured in seconds per vehicle; LOS = Level of Service per the 2000 HCM; OWSC = One way Stop control, DNE = Does Not Exist, Δ Delay = Change in delay (in seconds per vehicle) as compared to without project condition using Synchro 8

Table 9 - County of San Diego Measures of Significant Impact to Congestion on Circulation Element Roadway Segments				
Level of Service	Allowable Two Lane Road ADT	Greenfield Drive north of Madison Avenue		
LOS E	200 ADT	LOS	Project Traffic	Significant
		LOS E	83	NO
LOS = Level of Service				

SUMMARY OF FINDINGS AND CONCLUSIONS

- The proposed 23 single family residential units will generate 230 daily trips, 19 AM peak hour trips and 23 PM Peak hour trips.
- Analysis of the project impacts found that the project does not create any significant impacts on the roadways and intersections analyzed.
- Stop sign controls are recommended to be installed on the projects approaches entering Madison Avenue.

If you have any questions, please feel free to contact this office.

Sincerely,

Bill E Darnell

Bill E. Darnell, P.E.
Principal Engineer
RCE: 22338

Date Signed: 10/31/2017

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