DRAFT

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

LAMPSON AVENUE RESIDENTIAL PROJECT

GARDEN GROVE, CALIFORNIA

LSA

October 2022

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INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

LAMPSON AVENUE RESIDENTIAL PROJECT

GARDEN GROVE, CALIFORNIA

Submitted to:

City of Garden Grove
11222 Acacia Parkway
Garden Grove, California 92840

Prepared by:

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20 Executive Park, Suite 200
Irvine, California 92614
(949) 553-0666

Project No. CGG2201

October 2022

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1.0 PROJECT INFORMATION

1. **Project Title:**

   Lampson Avenue Residential Project

2. **Lead Agency Name and Address:**

   City of Garden Grove
   11222 Acacia Parkway
   Garden Grove, California 92840

3. **Contact Person and Phone Number:**

   Mary Martinez, Associate Planner, (714) 741-5315

4. **Project Location:**

   The 1.6-acre project (Assessor's Parcel Numbers [APN] 133-183-55, 133-183-56, 133-183-57, and 133-183-58) site located at 9071, 9081, and 9091 Lampson Avenue in Garden Grove is currently developed with three single-family homes and is surrounded by single-family and multifamily residential units (the surrounding uses are further described below). As shown on Figure 2-1, Project Location and Vicinity, regional access to the project site is provided by State Route 22 (SR-22), which is approximately 1 mile south of the project site and State Route 39 (SR-39), which is 1.1 mile west of the project site.

5. **Project Sponsor's Name and Address:**

   Bill Holman, PLC Communities
   888 San Clemente Drive, Suite 200
   Newport Beach, California 92660

6. **General Plan Designation:**

   According to the City of Garden Grove's (City) General Plan Land Use Map (2008), the project is designated Low Density Residential (LDR). Figure 2-3, General Plan Land Uses (provided in Chapter 2.0) shows the existing land use designations for the proposed project area.

7. **Zoning:**

   According to the City's Zoning Map, the site is zoned R-1-7, single-family residential (City of Garden Grove 2008). Figure 2-2, Zoning in the Project Vicinity, shows the existing zoning map for the proposed Project area.

8. **Description of Project:**

   The proposed project would consist of the development of 13 residential lots with private recreational areas, an open space parcel, and two private streets. Access to the project site would be provided by Lampson Avenue, and internal access would be provided by the two newly constructed private streets. See the detailed discussion below in Chapter 2.0, Project Description.

9. Surrounding Land Uses and Setting:

The project site is located at 9071, 9081, and 9091 Lampson Avenue in a highly urbanized and residential area of Garden Grove. Surrounding land uses include single-family residential uses to the north, south, and east and multifamily residential uses to the west. There are office uses farther to the west on the northwest corner of Magnolia Street and Lampson Avenue, and there is a church to the east past Barbara Avenue; however, the uses immediately surrounding the project site are residential.

10. Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreements):

a) City of Garden Grove: Adoption of the Initial Study/Mitigated Negative Declaration (IS/MND) and approval of: a Site Plan to construct the 13 two-story homes along with associated site improvements, zone change from R-1-7 to Planned Unit Development (PUD), and variance to deviate from the minimum 3-acre requirement to allow a zone change to PUD, and a Vesting Tentative Tract Map to subdivide the subject properties.

11. California Native American Consultation: Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resource Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Letters were sent to the list of tribal contacts provided by the Native American Heritage Commission (NAHC) via certified mail on August 3, 2022, notifying them of their opportunity to consult for this Project.

On August 10, 2022, the representative from the Gabrieleno Tribe – Kizh Nation responded with a list of construction monitoring measures that were requested to be included as part of project implementation. These mitigation measures are included in Section 4.18, Tribal Cultural Resources. With implementation of mitigation measures MM-TCR-1 through MM-TCR-3, the proposed project would avoid any impacts on any unforeseen resources encountered during grading activities.

2.0 PROJECT DESCRIPTION

This section describes the Lampson Avenue Residential Project (project) evaluated in this Initial Study/Mitigated Negative Declaration (IS/MND). It provides a description of the proposed project's location, objectives, and required approvals.

2.1 PROJECT LOCATION AND SITE DESCRIPTION

2.1.1 Regional Setting

The 1.6-acre project (Assessor's Parcel Numbers [APNs] 133-183-55, 133-183-56, 133-183-57, and 133-183-58) site, located in Garden Grove, California, is currently developed with three single-family homes and is surrounded by single-family and multifamily residential units. As shown on Figure 2-1, Project Location and Vicinity, regional access to the project site is provided by State Route 22 (SR-22), which is approximately 1.0 mile south of the project site and State Route 39 (SR-39), which is 1.1 miles west of the project site.

2.1.2 Project Vicinity and Surrounding Land Uses

The project site is located at 9071, 9081, and 9091 Lampson Avenue in a highly urbanized and residential area of Garden Grove. Surrounding land uses include single-family residential uses to the north, south, and east and multifamily residential uses to the west. There are office uses farther to the west on the northwest corner of Magnolia Street and Lampson Avenue and there is a church to the east past Barbara Avenue , however, the uses immediately surrounding the project site are residential.

2.1.3 Current Land Use and Zoning Designations

According to the City of Garden Grove's (City) General Plan Land Use Map (2008), the project is designated Low Density Residential (LDR). According to the City's Zoning Map, the site is zoned R-1-7, single-family residential (City of Garden Grove 2022). Figure 2-2, Zoning in the Project Vicinity, shows the existing zoning map for the proposed project area, and Figure 2-3, General Plan Land Uses, shows the existing land use designations for the proposed project area.

2.1.4 Existing Project Site

As illustrated by Figure 2-4, Project Area, the project site is currently developed with three unoccupied single-family homes and a small accessory building that was previously used as an office. Additional features on the site include open space areas and landscape/hardscape, including several large trees. The project would demolish all existing on-site structures and remove all landscaping.

The topography of the project site is relatively flat with a very gently downwards slope from the northern boundary of the project site to the southern boundary. In the existing condition, stormwater and urban runoff drain south towards the existing storm drain at the southern boundary of the project site on the north side of Lampson Avenue.

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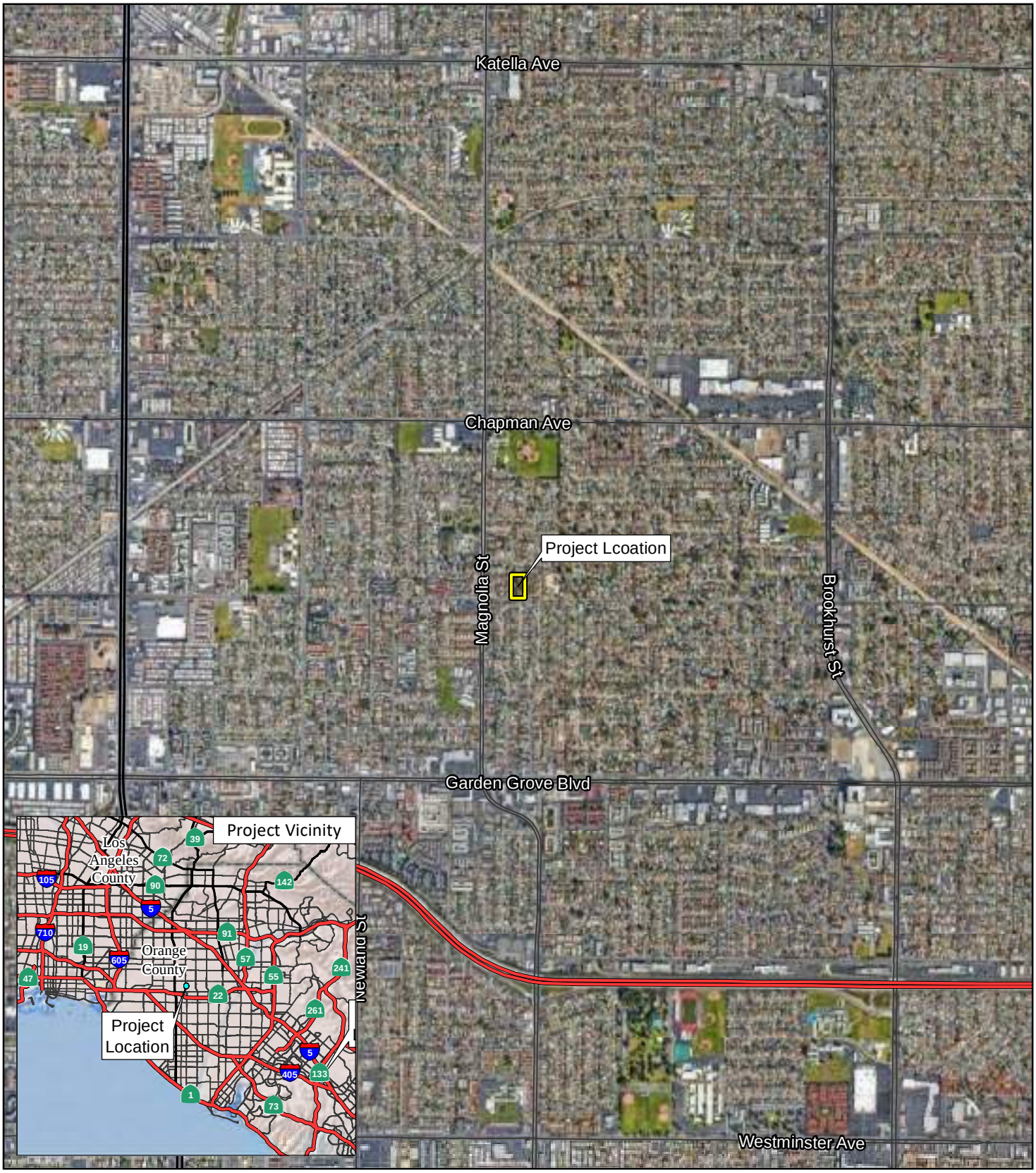

LSA

LEGEND

Project Location

FIGURE 2.1

N

0 1000 2000

FEET

SOURCE: Google (2021)

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Lampson Avenue Residential Project

Project Location and Vicinity

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LEGEND

Project Location

Zoning

Limited Multiple Residential Zone

Multiple-Family Residential Zone

Office Professional Zone

Open Space Zone

Planned Unit Development

Single-Family Residential Zone

N

0 150 300

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FIGURE 2.2

Lampson Avenue Residential Project

Zoning in the Project Vicinity

SOURCE: Google (2021), Orange County (2022)

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LEGEND

Project Location

General Plan Land Use

- Single Family Residential
- Multi-Family Residential
- General Office
- Commercial and Services
- Facilities
- Education
- Open Space and Recreation
- Vacant

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FIGURE 2.3

Lampson Avenue Residential Project

General Plan Land Uses

SOURCE: Google (2021), Orange County (2016)

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LEGEND

Project Location

FIGURE 2.4

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SOURCE: Google (2021)

Lampson Avenue Residential Project

Project Area

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2.2 PROPOSED PROJECT CHARACTERISTICS

The Applicant is requesting approval of the following discretionary actions and entitlements as part of the proposed project: (1) a zone change from R-1-7 to a Planned Unit Development (PUD), (2) variance to deviate from the minimum 3-acre requirement to allow a zone change to a PUD, (3) approval of a Vesting Tentative Tract Map to subdivide the subject properties, (3) approval of a Site Plan to construct the 13 two-story homes along with associated site improvements, and (4) adoption of the IS/MND.

2.2.1 Site Plan

The proposed project would result in the development of 13 residential lots with private recreational areas, an open space parcel, and two private streets (see Figure 2-5, Conceptual Site Plan). Of the 1.6-acre property, 1.17 acres would be reserved for the 13 single-family homes that would be constructed as a part of the project, 0.32 acre would be reserved to provide access and circulation throughout the project site by way of sidewalks and private streets, and 0.11 acre would be reserved for the open space lot.

All residential units would be constructed along the eastern, western, and northern boundaries of the project site, with private streets "A" and "B" forming a T through the center of the property. The residential lot areas would vary between 3,427 square feet (sf) and 4,414 sf. Each residential lot would include a 300 sf private recreational area.

2.2.2 Residential Units

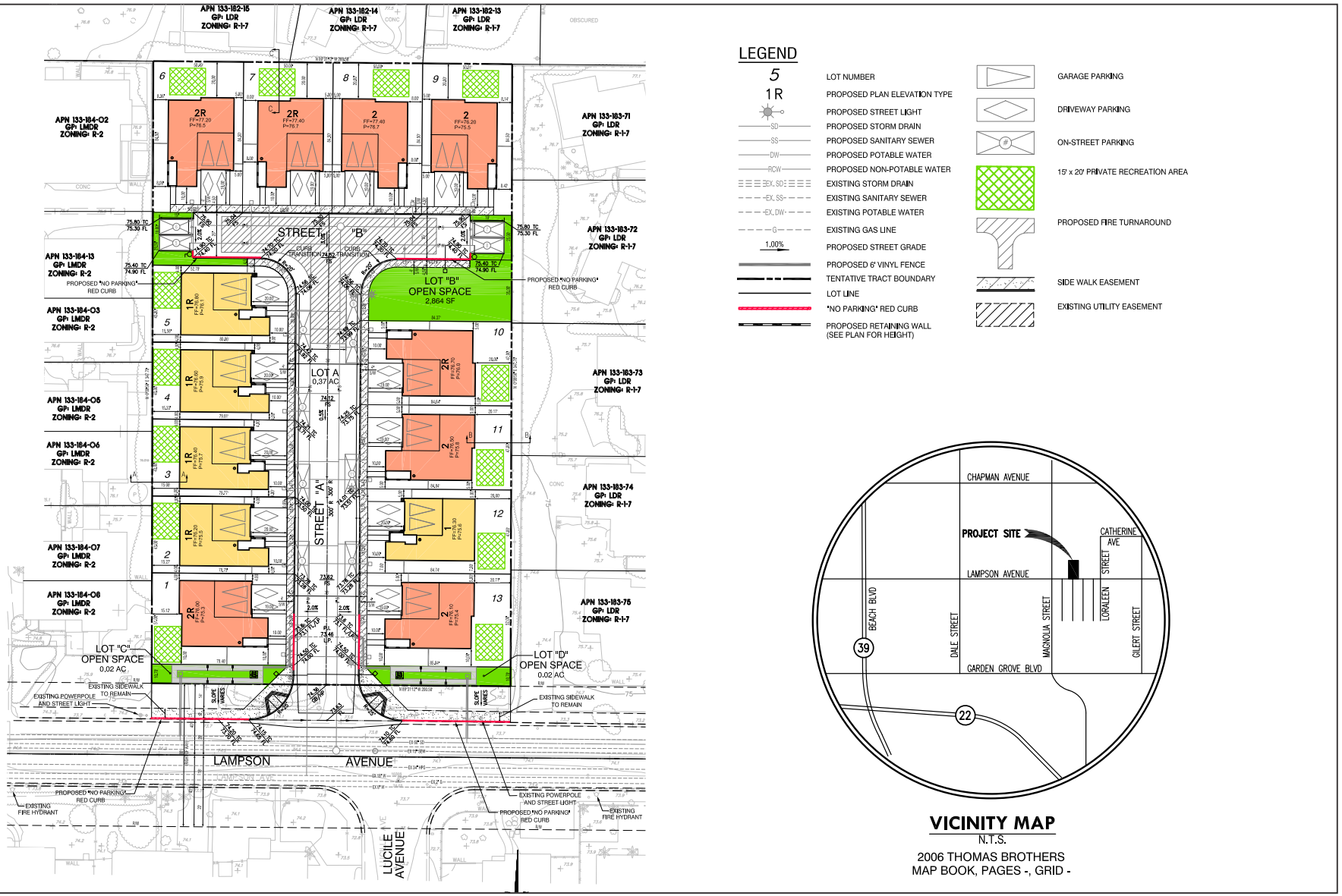
The project proposes to subdivide the 1.6-acre property into 13 single-family residential lots and construct a single-family home on each lot. Five of the units would be 2,524 sf (Plan 1), and the remaining eight units would be 2,807 sf (Plan 2). All units would be two stories and would include a two-car garage, covered entryways, associated front yard landscaped areas, and private backyards. The proposed homes would be designed to reflect Spanish or Contemporary Spanish aesthetics.

The elevations of the various units would vary depending on the architectural style and the square footage of the home. All units that are constructed in Contemporary Spanish style, regardless of whether they follow Plan 1 or Plan 2, would reach a maximum height of 27 feet (ft), 4 inches. The Plan 1 units that would be constructed in Spanish style would reach a maximum height of 28 ft, 4 inches, and the Plan 2 units that would be constructed in Spanish style would reach a maximum height of 29 ft, 3 inches.

2.2.3 Landscaping

The project site and the surrounding vicinity is generally flat in elevation. The landscaping plans would comply with all applicable codes of the Garden Grove Municipal Code. Landscaping would include a variety of plants that are native and indigenous to California's climatic conditions and require low and medium water use. The proposed trees include three, 36-inch, box canopy shade trees (Chinese elms) which would be in the open space area on the northeastern portion of the project site, four 24-inch street trees (Brisbane boxes) lining Lampson Avenue, and thirteen 24-inch box street trees (strawberry trees and carrotwood trees) lining the interior of Street "A" and Street "B." All proposed trees have moderate or low water use classifications. Figure 2-6, Conceptual Landscaping Plan, details

the types and locations of shrubbery, trees, and groundcover that would be present on the project site.



VICINITY MAP

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FIGURE 2.5

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SOURCE: MDS Consulting

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Lampson Avenue Residential Project

Conceptual Site Plan

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PLANTING LEGEND

36" BOX CANOPY SHADE TREE - 3 TOTAL		WUXOLS
	ULMUS PARVIFLORA / CHINESE ELM	MODERATE
24" BOX LAMPSON STREET TREE - 4 TOTAL		
	LOPHOSTEMON CONFERTUS / BRISBANE BOX	MODERATE
24" BOX INTERIOR TRACT STREET TREE - 13 TOTAL		
	ARBUTUS UNEDO 'MARINA' / STRAWBERRY TREE	LOW
	CUPANIOPSIS ANACARDIOIDES / CARROTWOOD TREE	MODERATE
LANDSCAPE AREAS		
	+/- 4,025 SF HOA MAINTAINED LANDSCAPE AREA	
	+/- 1,390 SF HOA MAINTAINED PARK TURF AREA	
	+/- 6,700 SF HOMEOWNER MAINTAINED FRONT YARD LANDSCAPE AREA	

HOA & HOMEOWNER MAINTAINED PLANT MATERIAL

(MAY INCLUDE BUT NOT LIMITED TO):

SHRUBS

BOTANICAL / COMMON NAME	SIZE	SPACING	WUCOL
BACCHARIS 'CENTENNIAL' / CENTENNIAL BACCHARIS	5 GAL.	48" O.C.	LOW
CAESALPINIA GILLIESII / DESERT BIRD OF PARADISE	5 GAL.	48" O.C.	LOW
CALLISTEMON V. 'LITTLE JOHN' / DWARF BOTTLE BRUSH	1-5 GAL.	36" O.C.	LOW
CAREX DIVULSA / EUROPEAN GRAY SEDGE	1 GAL.	24" O.C.	LOW
CEANOTHUS 'DARK STAR' / DARK STAR CEANOTHUS	5 GAL.	48" O.C.	LOW
DIANELLA R. 'LITTLE REV' / LITTLE REV FLAX LILY	1 GAL.	24" O.C.	LOW
HESPERALOE PARVIFLORA / RED YUCCA	5 GAL.	36" O.C.	LOW
LAVANDULA STOECHAS/ SPANISH LAVENDER	1 GAL.	24" O.C.	LOW
LEUCOPHYLLUM FRUTESCENS / TEXAS RANGER	5 GAL.	48" O.C.	LOW
MUHLENBERGIA CAPILLARIS / PINK MUHLY	5 GAL.	48" O.C.	LOW
ROSMARINUS O. 'TUSCAN BLUE' / TUSCAN BLUE ROSEMARY	5 GAL.	30" O.C.	LOW
TECOMA 'SUNRISE' / SUNRISE ESPERANZA	5 GAL.	60" O.C.	LOW
WESTRINGIA FRUTICOSA - COAST ROSEMARY	5 GAL.	60" O.C.	LOW

GROUNDCOVERS

BOTANICAL / COMMON NAME	SIZE	SPACING	WUCOL
MANDRALISCAE 'BLUE CHALK STICKS' / SENECIO	1 GAL.	18-24" O.C	LOW
MYOPORUM PARVIFOLIUM / CREEPING MYOPORUM	1 GAL.	18-36" O.C	LOW
ROSMARINUS O. 'PROSTRATUS' / PROSTRATE ROSEMARY	1 GAL.	18-36" O.C.	LOW

VINES

BOTANICAL / COMMON NAME	SIZE	SPACING	WUCOL
MACFADYENA UNGUIS-CATI / CAT'S CLAW	5 GAL	8' O.C.	LOW
LONICERA JAPONICA / JAPANESE HONEYSUCKLE	5 GAL	8' O.C.	LOW

CONSTRUCTION LEGEND

SYM.	DESCRIPTION
	ASPHALT STREETS.
	NATURAL GRAY CONCRETE SIDEWALK.
	6" CONCRETE MOWCURB SEPARATING TURF HOA MAINTAINED AREAS FROM HOMEOWNER MAINTAINED AREAS.
	PARK BENCH.
	PARK TRASH RECEPTACLE.

GARAGE PARKING

DRIVEWAY PARKING

ON-STREET PARKING

LSA

FIGURE 2.6

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Lampson Avenue Residential Project

Conceptual Landscaping Plan

SOURCE: RHA Landscape Architects Planners, Inc.

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The proposed project would incorporate smart irrigation technologies and high-efficiency irrigation methods, which would include sub-surface drip, stream bubblers with pressure-compensating screens that would be installed on separate valves, rotary nozzles, and smart irrigation controllers that shut off automatically when it rains. Bark mulch would be used to retain moisture and reduce the amount of evaporation.

Additionally, the proposed project includes the formation of a homeowners association (HOA), which would be in charge of maintaining the landscaped areas in the open space in the northeastern portion of the project site as well as along Lampson Avenue on the southern boundary of the project site. Individual homeowners would maintain all other landscaping of each proposed single-family home.

2.2.4 Access, Circulation, and Parking

Access to the project site would be provided by Lampson Avenue. The proposed "Street A" would be extended from Lampson Avenue and would terminate as it reaches Street "B" and forms a T-intersection at the northern portion of the project site. These proposed streets would be private and be maintained by the HOA. The project also includes sidewalks on both sides of Street "A" and Street "B." The proposed sidewalk along the eastern and western sides of Street "A" would connect to the existing sidewalk on Lampson Avenue. These sidewalks would extend farther north into the project site until they reach Street "B," where they would continue extending east and west into the project site. Another proposed sidewalk would be constructed in front of the front yards for Units 6, 7, 8, and 9.

Parking for residents would be provided with attached two-car parking garages with additional space for two cars on the driveway of each home. Parking for residents or visitors would also be provided along the Streets "A" and "B" and would include four spaces on each side of Street "A," and four spaces on Street "B", for a total of 12 on-street spaces for visitors/residents.

2.2.5 Lighting

There are two existing power poles and streetlights along the northern side of Lampson Avenue at the project site boundary that would be protected in place. Four additional streetlights are proposed along Street "A."

2.2.6 Infrastructure

2.2.6.1 Water

The Water Services Division of the City's Public Works Department currently provides potable water service to the project site. The water supply comes from two sources; imported water from the Metropolitan Water District of Southern California and local groundwater. The Water Services Division is responsible for maintaining the wells, reservoirs, import water connections, and the distribution systems that would deliver water to the project area. There are two existing water lines: an 8-inch water line and an 18-inch water line along the southern boundary of the project site on the south of Lampson Avenue. The proposed project would extend an 8-inch water line through Street "A" north towards Street "B", where it would connect to another proposed 8-inch water line that would extend along Street "B." These proposed water lines would connect to the existing 18-inch water line at the southern boundary of the project site along the south side of Lampson Avenue.

2.2.6.2 Sewer

Sewer operations are maintained by the City's Water Services Division of the Public Works Department. The Orange County Sanitation District (OCSD) treats the wastewater that passes through the City's sewer system. There is an existing 18-inch sewer line along the southern boundary of the project site on the north side of Lampson Avenue. The proposed project would extend an 8-inch sewer line through Street "A" north towards Street "B", where it would connect to another proposed 8-inch sewer line that would extend along Street "B." These proposed sewer lines would connect to the existing 15-inch sewer line at the southern boundary of the project site along the south side of Lampson Avenue.

2.2.6.3 Drainage and Stormwater

The City of Garden Grove Environmental Compliance Division is responsible for maintaining and protecting public health and the environment in the Garden Grove, including the street and storm drain system. There is an existing 60-inch storm drain that runs along the southern boundary of the project site on the north side of Lampson Avenue. The proposed project would install a 6-inch curb and gutter along the proposed Street "B" that would drain toward Street "A". Street "A" would consist of rolled curbs and a 2 percent street grade that would direct all runoff from the street to the two catch basins that are proposed along both sides of Street "A" near Lampson Avenue. There would also be two catch basins along the two proposed open space asphalted areas adjacent to the landscaped areas near Lampson Avenue. These proposed gutters and catch basins would connect to the existing 60-inch storm drain at the southern boundary of the project site along the north side of Lampson Avenue.

2.2.6.4 Utilities and Service Systems

The project site is served by Southern California Edison (SCE) for electrical services, Southern California Gas Company (SoCalGas) for natural gas services, Time Warner/Spectrum for cable services, and Verizon for telecommunication facilities, including telephone and fiber optic lines. There is an existing 2-inch natural gas line that runs along the southern boundary of the project site on the north side of Lampson Avenue.

2.2.7 Zone Change to PUD

The proposed project involves a zone change from Single-Family Residential (R-1-7) to PUD in order to utilize the Special Requirements for Small Lot Subdivisions per Code section 9.12.040.060. The zoning regulations and development standards for the proposed project would be required to comply with the regulations and standards established for Small Lot Subdivisions in Section 9.12.040.060 of the City of Garden Grove Municipal Code.

The small lot subdivision requires that setbacks be provided with a minimum of 10 ft from the property line. These setbacks are required to provide landscaping along the perimeter in the form of screening or canopy trees staggered along the property lines. Rear yard setbacks are determined by the zoning on the adjacent parcels. Therefore, the proposed project would provide 15 ft setbacks to the R-2 zoned property to the west of the project site and 20 ft setbacks to the R-1-7 zoned properties to the north and east of the project site. Additionally, a 6 to 8 ft perimeter block wall is required to be constructed around the proposed project site. Maximum heights for the proposed dwelling units are

determined by the zoning on the adjacent parcels. Developments adjacent to R-1 zoned parcels may not exceed heights of 30 ft, and developments adjacent to R-2 zoned parcels may not exceed heights of 35 ft. The units for the proposed project would not exceed 29 ft, 3 inches, and would therefore comply with the height regulations.

2.2.8 Variance to Deviate from the Minimum 3-Acre Requirement

The proposed project involves a variance from the requirement that a PUD for a residential development must be a minimum of 3 acres. Per Section 9.12.030.020 of the Garden Grove Municipal Code, "planned unit development procedures shall apply only to those individual sites having a net area of… three acres for residential developments." Because the proposed project site is a net of 1.6 acres, a variance from this requirement would allow for the proposed residential development to be constructed.

2.2.9 Adoption of the IS/MND

Per *California Environmental Quality Act* (*CEQA) Statutes and Guidelines* Section 15070(b)(1), a Mitigated Negative Declaration may be prepared for a project when the Initial Study has identified potentially significant effects on the environment but revisions in the project plans would void the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment. The project is anticipated to result in the preparation and eventual adoption of an IS/MND.

2.3 PROJECT CONSTRUCTION

2.3.1 Grading and Earthwork

The proposed site elevations would be similar to the existing conditions on the project site. There would be no manufactured slopes or retaining walls proposed by the grading plan. Grading activity would result in 11,770 cubic yards of cut (including 10,253 cubic yards of over excavation) and 9,743 cubic yards of fill. The grading elevations would vary from approximately 76.5 to 76.7 ft above mean sea level along the northern boundary of the project site and 75.3 to 75.4 ft above mean sea level along the southern boundary of the project site.

2.4 REQUIRED PERMITS AND APPROVALS

In accordance with Sections 15050 and 15367 of the *State CEQA Guidelines*, the City is the designated Lead Agency for the proposed project and has principal authority and jurisdiction for CEQA actions and project approval. Responsible Agencies are those agencies that have jurisdiction or authority over one or more aspects associated with the development of a proposed project and/or mitigation. Trustee Agencies are State agencies that have jurisdiction by law over natural resources affected by a proposed project.

The discretionary actions to be considered by the City as a part of the proposed project include:

- Adoption of the IS/MND
- Zone change from R-1-7 to PUD
- Site Plan approval to construct the 13 two-story homes along with associated site improvements
- Vesting Tract Map approval to subdivide the subject properties
- Variance to deviate from the minimum 3-acre requirement to allow a zone change to PUD

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist in Chapter 3.0.

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

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

☐ I find that although the 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 proposed project, nothing further is required.

Mary Martinez
Associate Planner

October 11, 2022
Date

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4.0 CEQA ENVIRONMENTAL CHECKLIST

4.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, 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 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 a 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 which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

4.1.1 Impact Analysis

a. Would the project have a substantial effect on a scenic vista?

No Impact. The City of Garden Grove is largely urban by nature. The proposed project area and the surrounding vicinity are developed with residential, commercial, and institutional uses. There are no undeveloped or vacant lands or areas in the proposed project area or within 0.5 mile of the proposed project area. Additionally, the City's General Plan does not indicate any scenic vistas that must be preserved (City of Garden Grove 2008). Rather, the City has included a Parks, Recreation, and Open Space Element in its General Plan because providing adequate parkland, recreation opportunities, and management and conservation of limited open space resources is a priority to the urbanized City.

The current use of the project site is residential, with three single-family units developed on the project site. The approximately 1.6-acre project site consists of four separate parcels, which are bounded by Lampson Avenue to the south, and residential uses to the north, east, and west. The surrounding views comprise a developed suburban environment that is built out. No scenic vistas are visible from or through the project site. Additionally, no public parks are located on or adjacent to the project site. The park closest to the project site is Hare School Park which is located approximately 0.3 mile north of the project site at 12012 Magnolia Street.

The proposed project would be located in a fully urbanized area of the City. The proposed project includes the construction of 13 two-story residential units which would have a maximum height of 29 ft and 3 inches, which would be consistent with the City's height standards in the Municipal Code. Additionally, the project site is surrounded by a mix of low-density and medium low-density residential uses. While no designated scenic vistas are visible from the project site or surrounding

properties, the proposed project would not block views of scenic vistas because it would not be substantially taller than the existing surrounding uses. Therefore, because the proposed project constitutes an expansion to existing buildings in an already built-out area of the City and no identified scenic vistas are within its proximity, the proposed project would not have the potential to damage scenic vistas, and no mitigation would be required.

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

No Impact. There are no officially designated or eligible State scenic highways within the proposed project area or in City of Garden Grove. The nearest eligible listing for State scenic highways to the proposed project area according to the California Department of Transportation (Caltrans) is a portion of State Route 1 (SR-1), which is approximately 7.1 miles southwest of the proposed project area. The nearest officially designated State scenic highway is a portion of State Route 91 (SR-91) that is located approximately 9.5 miles northeast of the proposed project area (Caltrans 2018).

Additionally, the proposed project includes the demolition of four structures on the proposed project site, none of which are designated historic buildings. The proposed project does not include changes to any designated historic buildings and would not result in impacts to scenic trees or rock outcroppings within a State-designated scenic highway. Therefore, the proposed project would not result in damage to any scenic resources, and no impact within a State scenic highway would occur.

c. In non-urbanized areas, would the project 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 a 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. As described above, the proposed project is located in a largely urbanized area, surrounded by residential, commercial, and institutional land uses. The area surrounding the proposed project limits is zoned for the following zoning designations: single-family residential (R-1-7), limited multiple residential (R-2), planned unit development (PUD (R-2)), office professional (O-P), and multiple-family residential (R-3). General plan land use designations for the area surrounding the proposed project limits include low-density residential, low medium density residential, and office professional. Lampson Avenue is designated as a four-lane undivided highway (secondary arterial) in the City of Garden Grove General Plan Circulation Element.

No structures are being proposed that would diminish the existing visual character of the area or quality of public views of the site and its surroundings. Although the proposed project includes the removal of all existing trees on the project site, the landscaping plan for the proposed project would offset this loss by proposing to plant 20 new trees, by adding approximately 10,700 sf of landscaped area and approximately 1,300 sf of park turf area, and by complying with all applicable codes of the Garden Grove Municipal Code as required. The proposed trees to be planted include 3 Chinese elms, 4 Brisbane boxes, and 13 strawberry trees and carrotwood trees which would reach 40–50 ft, 30–35 ft, 15–30 ft, and approximately 35 ft at maturity, respectively. The 4 Brisbane box trees (24-inch box) would be planted as street trees within the public right-of-way frontage of Lampson Avenue, where no street trees exist.

Other proposed improvements include the development of 13 residential lots with private recreational areas, an open space parcel, and two private streets. The residential units would be designed to reflect Spanish or Contemporary Spanish aesthetics. The proposed units would be consistent with the current urban character of the proposed project area and would reinforce the existing residential development patterns in the area. Because the zoning regulations and development standards for the proposed project would comply with the regulations and standards established for Small Lot Subdivisions in Section 9.12.040.060 of the City of Garden Grove Municipal Code, any regulations governing scenic quality from this section of the Municipal Code would apply to the proposed project. According to the Municipal Code, however, in R-1, R-2, and R-3 zones, there are no regulations specifically governing scenic quality. The project would be compliant with general provisions and requirements for landscaping, trees on the project site, open space, recreation and leisure areas, and building design such as those articulated in Sections 9.12.040.

Due to the residential, commercial, and institutional land uses and developed nature of the surrounding area, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. Impacts would be less than significant, and no mitigation is required.

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

Less Than Significant Impact. Existing sources of night lighting attributed to nearby residential and commercial developments include streetlamps, accent lighting, parking lot lighting, and vehicle headlights. There are two existing power poles and streetlights along the north side of Lampson Avenue that would be protected in place. The proposed project would also include additional street lighting along the proposed internal street, Street "A." Four streetlights would be constructed along the east side of Street "A" to illuminate the interior of the development. All streetlights would direct the light away from adjoining premises and would comply with City regulations for outdoor lighting, including but not limited to Section 9.08.040 of the Garden Grove Municipal Code. Additionally, the proposed project would comply with the City's General Plan Community Design Element, which states that street lighting along collector and residential streets should reflect the smaller scale and traditional character of the residential neighborhood by replacing cobra-head style with a smaller pedestrian scaled thematic streetlight.

Sources of glare during the day result primarily from parked cars and from sunlight reflected from window glazing on buildings. The proposed project provides 12 parking spaces along internal Street "A" and Street "B," and 26 driveway parking spaces. The proposed project also includes 13 new residential units with windows that are typical of residential uses and are unlikely to introduce a significant source of daytime glare. Lighting associated with the 13 residential units would conform to the City's lighting regulations and would be typical of safety and security lighting associated with residential developments, including those in the project vicinity. Based on the above considerations, any source of glare caused by the proposed project would be incremental. The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, and impacts would be less than significant.

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4.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

4.2.1 Impact Analysis

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The California Natural Resources Agency's Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California's agricultural resources. According to the California Important Farmland Finder, the proposed project is in an area classified as Urban and Built-Up Land and is not designated as farmland (California DOC, Important Farmland Finder, 2017a). Additionally, no agricultural uses exist on the site. Because the proposed project area is not designated as farmland pursuant to the FMMP, the proposed project would not result in the conversion of farmland to a non-agricultural use. Therefore, no impacts related to farmland conversion would occur, and no mitigation is required.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The area surrounding the proposed project is zoned for single-family residential (R-1-7), limited multiple residential (R-2), planned unit development (PUD (R-2)), office professional (O-P), and multiple family residential (R-3), and therefore it is not zoned for agricultural use. According to the California Department of Conservation's most recently published Williamson Act Contracted Land Map, there are no Williamson Act agricultural preserves located within the City boundaries (California DOC Williamson Act Contract Land, 2017). Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract. No impact would occur.

c. Would the project 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))?

No Impact. Public Resources Code Section 12220(g) identifies forest land as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

The area surrounding the proposed project area is zoned for residential and office professional uses. There is no land zoned for forest land, timberland, or timberland production within the City's zoning code. The proposed project area is not currently being managed or used for forest land or timberland. No impact would occur.

d. Would the project result in the loss of forest land or conversion of forestland to non-forest use?

No Impact. As discussed in the section above, the proposed project does not support forests, nor is there any forest land adjacent to the proposed project. Further, there is no land zoned for forest land, timberland, or timberland production in the City's zoning code. The proposed project would not result in the loss of forest land or the conversion of forest land to non-forest uses. No impact would occur.

e. Would the project 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?

No Impact. There are no agricultural operations or timberland production operations within the proposed project area (DOC 2017a); therefore, the proposed project would not result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

4.3 AIR QUALITY

Where 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.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

The impact analysis below is based on the *Air Quality and Greenhouse Gas Technical Memorandum* (2022), prepared by LSA for the proposed project, which is provided in Appendix A of this document.

4.3.1 Impact Analysis

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The proposed project would construct 13 single-family residences. The proposed project is not considered a project of statewide, regional, or area-wide significance (e.g., large-scale projects such as airports, electrical generating facilities, petroleum and gas refineries, residential developments of more than 500 dwelling units, shopping centers, or business establishments employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space) as defined in the California Code of Regulations (Title 14, Division 6, Chapter 3, Article 13, Section 15206(b)). Because the proposed project would not be defined as a regionally significant project under the California Environmental Quality Act (CEQA), it does not meet the Southern California Association of Governments' (SCAG) Intergovernmental Review criteria.

The City's General Plan is consistent with the SCAG Regional Comprehensive Plan Guidelines and the Southern California Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP). Pursuant to the methodology provided in SCAQMD's 1993 *CEQA Air Quality Handbook* and its associated updates, consistency with the Basin's 2016 AQMP is affirmed when a project (1) would not increase the frequency or severity of an air quality standards violation or cause a new violation, and (2) is consistent with the growth assumptions in the AQMP. Consistency review is presented as follows:

1. The project would not result in short-term construction and long-term operational pollutant emissions that exceed any emissions thresholds established by SCAQMD, as demonstrated under

Threshold 4.3 (b), below; therefore, the project would not result in an increase in the frequency or severity of an air quality standards violation or cause a new air quality standards violation. Therefore, the proposed project would be consistent with the first criterion.

2. The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as significant. In addition, the project does not require a General Plan or Specific Plan Amendment. Therefore, the proposed project would be consistent with the second criterion.

Based on the consistency analysis presented above, the proposed project would be consistent with the regional AQMP, and impacts would be less than significant. No mitigation is necessary.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. The proposed project is a part of the South Coast Air Basin. The South Coast Air Basin includes portions of Los Angeles, Riverside, and San Bernardino Counties and all of Orange County. In total, the South Coast Air Basin covers an area of 6,745 square miles with a population of 14.6 million. The Basin is currently designated as non-attainment for the federal and State standards for ozone (O_3) and particulate matter less than 2.5 microns in size ($PM_{2.5}$). In addition, the Basin is in non-attainment for the particulate matter less than 10 microns in size (PM_{10}) standard. During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by grading, building construction, paving, and other activities. Emissions from construction equipment are also anticipated and would include carbon monoxide (CO), nitrogen oxides (NO_x), volatile organic compounds (VOCs), directly emitted $PM_{2.5}$ or PM_{10}, and toxic air contaminants such as diesel exhaust particulate matter.

Construction. Project construction activities would include demolition, grading, site preparation, building construction, architectural coating, and paving activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emissions reductions of 50 percent or more. SCAQMD has established Rule 403: Fugitive Dust, which would require the Applicant to implement measures that would reduce the amount of particulate matter generated

during the construction period. In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, sulfur oxides (SO_x), NO_x, VOCs, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using California Emissions Estimator Model (CalEEMod) and summarized in Table 4.3.A. Attachment B of the *Air Quality and Greenhouse Gas Technical Memorandum* located in Appendix A provides CalEEMod output sheets.

Table 4.3.A: Short-Term Regional Construction Emissions

	Maximum Daily Regional Pollutant Emissions (lbs/day)							
Construction Phase	**VOC**	**NO_X**	**CO**	**SO_X**	**Fugitive PM_{10}**	**Exhaust PM_{10}**	**Fugitive $PM_{2.5}$**	**Exhaust $PM_{2.5}$**
Demolition	1.2	26.4	19.7	<0.1	0.3	0.9	0.1	0.9
Site Preparation	0.7	19.4	14.0	<0.1	2.9	0.5	1.4	0.5
Grading	0.7	19.2	12.7	<0.1	3.4	0.5	1.6	0.5
Building Construction	1.1	20.7	16.8	<0.1	0.4	0.9	0.1	0.9
Paving	0.6	11.8	10.5	<0.1	0.3	0.4	0.1	0.4
Architectural Coating	1.9	2.4	2.5	<0.1	0.3	0.1	0.1	0.1
Peak Daily Emissions	**3.0**	**26.4**	**19.7**	**<0.1**	**3.9**		**2.1**	
SCAQMD Threshold	**75.0**	**100.0**	**550.0**	**150.0**	**150.0**		**55.0**	
Significant?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: Compiled by LSA (May 2022).
Note = Maximum emissions of VOC occurred during the overlapping building construction and architectural coating phases.
CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SOx = sulfur oxides
VOC = volatile organic compounds

Based on the analysis results, the proposed project would not exceed daily emissions thresholds for any criteria pollutant. Therefore, the proposed project would not lead to cumulatively considerable increases in construction emissions, and impacts would be less than significant. No mitigation is required.

Operation. Long-term air pollutant emissions associated with operation of the proposed project include emissions from area, energy, and mobile sources. Area-source emissions include architectural coatings, consumer products, and use of landscape maintenance equipment. Energy-source emissions result from activities in buildings that use electricity and natural gas. Mobile-source emissions are from vehicle trips associated with operation of the project.

Long-term operational emissions associated with the proposed project were calculated using CalEEMod. Table 4.3.B provides the proposed project's estimated operational emissions.

Table 4.3.B: Project Operational Emissions

Emission Type	Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	0.6	0.2	1.2	<0.1	<0.1	<0.1
Energy Sources	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Mobile Sources	0.3	0.3	2.6	<0.1	0.7	0.2
Total Project Emissions	**0.9**	**0.6**	**3.8**	**<0.1**	**0.7**	**0.2**
SCAQMD Threshold	**55.0**	**55.0**	**550.0**	**150.0**	**150.0**	**55.0**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (May 2022).
Note: Some values may not appear to add correctly due to rounding.
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

The results shown in Table 4.3.B indicate the proposed project would not exceed the daily significance criteria for VOCs, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ emissions. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard, and impacts would be less than significant. No mitigation is required.

Vehicular trips associated with the proposed project could contribute to congestion at intersections and along roadway segments in the vicinity of the proposed project site. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. The proposed project is expected to generate 95 net new average daily trips, with 7 trips occurring in the AM peak hour and 10 trips occurring in the PM peak hour. As the proposed project would not generate 100 or more AM or PM peak hour trips, CO concentrations are not expected to significantly increase as a result of the proposed project.

Therefore, given the extremely low level of CO concentrations in the project area and the lack of unacceptable operating conditions at any intersections, project-related vehicles are not expected to result in CO concentrations exceeding the State or federal CO standards. No CO hot spots would occur, and the project would not result in any project-related impacts on CO concentrations. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard, and impacts would be less than significant. No mitigation is required.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors are defined as people who have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units. The closest sensitive receptors include single-family residential uses adjacent to the north and east of the site, multifamily residential uses adjacent to the west of the site, and single-family uses across Lampson Avenue to the south of the site. A localized significance threshold (LST) analysis was completed to show the construction and operational impacts at 25 meters (82 ft) to the nearest sensitive receptors to the project site in Source Receptor Area 17, based on the 1.6-acre project size. Tables 4.3.C and 4.3.D show the results of the LST analysis during project construction and operation, respectively.

Table 4.3.C: Project Localized Construction Emissions

Source	Pollutant Emissions			
	NO_X (lbs/day)	**CO (lbs/day)**	**PM_{10} (lbs/day)**	**$PM_{2.5}$ (lbs/day)**
On-Site Emissions	26.2	19.3	3.7	2.0
Localized Significance Threshold	**98.0**	**600.0**	**5.0**	**3.5**
Significant?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (May 2022).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Table 4.3.D: Project Localized Operational Emissions

Source	Pollutant Emissions			
	NO_x (lbs/day)	**CO (lbs/day)**	**PM_{10} (lbs/day)**	**$PM_{2.5}$ (lbs/day)**
On-Site Emissions	<1.0	1.3	<1.0	<1.0
Localized Significance Thresholds	**98.0**	**600.0**	**1.5**	**1.0**
Significant?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (May 2022).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

As detailed in Tables 4.3.C and 4.3.D, the emissions levels indicate that the project would not exceed SCAQMD LSTs during project construction or operation. On a regional scale, the quantity of emissions from the project is incrementally minor. Because the SCAQMD has not identified any other methods to quantify health impacts from small projects, and due to the size of the project, it is speculative to assign any specific health effects to small project-related emissions. However, based on this localized analysis, the proposed project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, the project would not expose sensitive receptors to substantial levels of pollutant concentrations, and impacts would be less than significant. No mitigation is required.

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

Less Than Significant Impact. Heavy-duty equipment on the project site during construction would emit odors, primarily from equipment exhaust. However, the construction activity would cease after construction is completed. The nature of the proposed residential uses are not anticipated to emit any objectionable odors. No other sources of objectionable odors have been identified for the proposed project. Therefore, the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. No mitigation is required.

4.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant 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, 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?	☐	☐	☐	☒

4.4.1 Impact Analysis

a. Would the project 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?

No Impact. In its existing condition, there are four buildings on the project site including three single-family residential homes and a small accessory building. Additional features include open space areas, hardscape, and ornamental landscaping, including mature trees. The project site is entirely developed with residential uses and located in an urban area and surrounded by developed single-family and multi-family residential neighborhoods. The United States Fish and Wildlife Service (USFWS) Critical Habitat for Threatened & Endangered Species map does not identify any locations of critical habitat within the project site or within the City of Garden Grove. The closest known critical habitat is located approximately 6.6 miles southwest of the project site at the Bolsa Chica Ecological Reserve. Due to the developed character of the project site and its surroundings, no special-status species are anticipated to be directly affected by the project due to the lack of suitable habitat on the project site.

Therefore, no impacts to sensitive or special-status species would result from implementation of the proposed project, and no mitigation is required.

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

No Impact. The project site is located in an urban area and is previously disturbed and developed with four buildings, a paved driveway that traverses the project site, and ornamental landscaping. It does not support any special-status or sensitive riparian habitat as identified in regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or USFWS (Orange County 2013). Therefore, no impacts related to riparian habitat or other sensitive natural communities identified in a local or regional plan would result from project implementation, and no mitigation is required.

c. Would the project 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. According to the National Wetlands Inventory managed by the USFWS, the project site does not contain federally protected wetlands (USFWS n.d.). The project site is located entirely outside of streambeds, banks, and riparian habitat. No potential waters of the United States or CDFW jurisdictional areas are located on the project site, which is entirely developed with single-family residential uses and surrounded by development consisting of similar urban uses.

Although construction activities have the potential to result in temporary indirect effects to water quality, including a potential increase in erosion and sediment transport into downstream aquatic areas and the contamination of waters from construction equipment, these potential indirect effects to hydrology and water quality would be avoided or substantially minimized through the implementation of Best Management Practices (BMPs) and the Stormwater Pollution Prevention Plan (SWPPP) as discussed in Section 4.10, Hydrology and Water Quality. Specifically, adherence to Regulatory Compliance Measure RC-WQ-1 and RC-WQ-4, provided in Section 4.10, Hydrology and Water Quality, would address erosion-related impacts during construction through implementation of construction site BMPs which would include, but not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on-site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. As specified in RC-WQ-1, the proposed project would comply with the requirements of the Construction General Permit and the City of Garden Grove Municipal Code. With compliance with the requirements in the Construction General Permit and implementation of the construction BMPs as specified in RC-WQ-1, construction impacts related to on- or off-site erosion would be less than significant. Therefore, there would be no impacts on State or federally protected wetlands, and no mitigation is required.

d. Would the project 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 Impact with Mitigation Incorporated. Due to the lack of sensitive or special-status species or their habitats on the project site, the project would not result in impacts on candidate, sensitive, or special-status animal species. However, the proposed project would involve the removal or demolition of all existing site features, including removal of existing mature trees within the project site. These trees have the potential to provide suitable nesting habitat for migratory bird species. In compliance with the federal Migratory Bird Treaty Act, which protects the active nests of migratory bird species, the proposed project would be required to avoid impacts on nesting resident and/or migratory birds by avoiding vegetation removal during the avian nesting season (February 1 through August 31) as outlined in Mitigation Measure MM-BIO-1. The proposed project has the potential to impact active migratory bird nests if and to the extent that those trees are removed during the avian nesting season and they contain nests. Mitigation Measure MM-BIO-1 would address any impacts to nesting resident and/or migratory birds should it be necessary to conduct vegetation removal during the nesting season and nests are present. With implementation of MM-BIO-1, the proposed project's potential impacts on nesting migratory birds would be reduced to a less than significant level.

Mitigation Measure

MM-BIO-1 **Nesting Bird Survey and Avoidance.** If vegetation removal, construction, or grading activities are planned to occur within the active nesting bird season (February 1 through August 31), the City of Garden Grove Director of Community and Economic Development, or designee, shall confirm that the Applicant has retained a qualified biologist who shall conduct a preconstruction nesting bird survey no more than 3 days prior to the start of such activities. The nesting bird survey shall include the work area and areas adjacent to the site (within 500 feet, as feasible) that could potentially be affected by project-related activities such as noise, vibration, increased human activity, and dust. For any active nest(s) identified, the qualified biologist shall establish an appropriate buffer zone around the active nest(s). The appropriate buffer shall be determined by the qualified biologist based on species, location, and the nature of the proposed activities. If active nests are present at the time of survey, the buffer shall be deemed effective by the qualified biologist if nesting birds do not appear to be affected by construction activities and young birds successfully fledge from the nest. Project activities shall be avoided within the buffer zone until the nest is deemed no longer active, as determined by the qualified biologist.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The City's Conservation Element in the General Plan acknowledges that biological resources in Garden Grove are almost non-existent due to the urban nature of the City and surrounding area. Therefore, the Conservation Element does not provide specific policies for the protection of biological resources. However, the City of Garden Grove adopted Tree Ordinance

Number 552 in 1961, which codified Garden Grove Municipal Code Chapter 11.32, Trees. Chapter 11.32 of the City's Municipal Code is intended to preserve, protect, and promote the health, safety, and general welfare of the public by providing for the regulation of trees located in thoroughfares, parks, and public areas owned or controlled by the City. The Municipal Code regulates the planting, maintenance, and removal of trees within public property and establishes tree planting standards to ensure that newly planted trees thrive.

The proposed project is located in an urbanized area and is bordered on all sides by development and has been previously disturbed. Although there are no biologically significant resources within the project site, there are mature trees on the project site that would be removed. However, the on-site trees are located on private property and none are located within the public right-of-way. Therefore, project implementation would not conflict with the City's Tree Ordinance. As discussed above in Section 2.3.3, of Chapter 2.0, Project Description, the project would implement the planting of four street trees (24-inch box) in the Lampson Avenue right-of way where no trees currently exist. Overall, the proposed project would have no impact related to a conflict with local policies or ordinances protecting biological resources, and no mitigation is required.

f. Would the project 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 project site is located in a residential area which is surrounded by single- and multi-family land uses, and it is not located in an environmentally sensitive area. The project site is not located within or otherwise affected by a Habitat Conservation Plan or Natural Community Conservation Plan. The proposed project does not propose or require development or activities that would conflict with the provisions of an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, the proposed project would have no impact related to a conflict with an adopted Habitat Conservation Plan or Natural Community Conservation Plan. No mitigation is required.

4.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant 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 §15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

4.5.1 Impact Analysis

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less Than Significant Impact. As described earlier, the project site is currently developed with three unoccupied single-family homes and a small accessory building used as an office. Additional features on the site include open space areas and landscape/hardscape, including several large trees. The record search conducted for the site did not identify any historic resources. Additionally, the on-site structures are not locally designated as historic or listed on the state's register. However, a review of building permits available online indicate that in 1979 a building was demolished and new buildings were constructed in 1979 and later on 9091 Lampson Avenue and 9071 Lampson Avenue. A survey was also conducted as a part of the Cultural Resources Assessment, which concluded that the residence located at 9081 Lampson Avenue on the northwestern corner of the project site was at least 70 years old, and the garage structures on the west were built at about the same time that the house was constructed. However, over the years alterations have been made to the structures; the City has a Code Enforcement case on record from 2002 stating that the dwelling was altered without permits. Therefore, due to lack of any historic resources being identified in the records search and none locally designated as historic or listed on the state's register, impacts are considered less than significant.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact with Mitigation Incorporated. A record search to identify previously recorded prehistoric and historic cultural resources and prior cultural resource surveys within 0.25 mile of the project area as well as a pedestrian survey of the project area was conducted for the proposed project. The record search indicated that only one cultural resource study which included the project area was conducted. This study identified no previously recorded cultural resources within the project area. The record search also indicated that another study which included but did not survey the project area was also conducted. Therefore, the report prepared for the proposed project is the first instance in which an archaeological survey was conducted within the project area.

No known archaeological resources were identified in the proposed project area during the survey. The survey found visible sediment everywhere across the property except where gravel, asphalt, concrete, buildings, or vegetation existed. However, there is a potential to encounter unknown archaeological resources during construction excavation activities that extend five to eight feet below ground surface. With implementation of MM-TCR-1 through MM-TCR-3 (see section 4.18), which require archeological monitoring during construction, potential impacts to unknown archaeological resources are reduced to less than significant.

c. Would the project disturb any humans remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. As indicated above, the record search and survey conducted for the proposed project did not identify any archaeological resources on the project site. If human remains are encountered at the project areas, California Health and Safety Code Section 7050.5 and *State CEQA Guidelines* Section 15064.5(e)(1) state that no further disturbance may occur to the area of the find until the County Coroner has made a determination of origin and disposition of the human bone pursuant to Public Resources Code Section 5097.98. The County Coroner would be required to be notified of the find immediately and shall make a determination within two working days of being notified. If the remains were determined to be Native American, the County Coroner would notify the NAHC by phone within 24 hours, and the NAHC would then immediately determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD would complete the inspection and make recommendations or preferences for treatment of the remains within 48 hours of being granted access to the site. The MLD's recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment. The required adherence to state law would ensure that potential impacts to unknown human remains during construction are less than significant.

4.6 ENERGY

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

The *Air Quality and Greenhouse Gas Technical Memorandum* (2022), prepared by LSA for the proposed project, is provided in Appendix A of this document. A portion of the section below is based on the results of the Air Quality and Greenhouse Gas Technical Memorandum.

4.6.1 Impact Analysis

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

Less Than Significant Impact. The proposed project would require demolition, site preparation, grading/utility improvements, construction, paving, and architectural coating activities during construction. Construction activities require energy for the manufacture and transportation of construction materials, preparation of the site for grading activities, and construction. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. Construction activities are not anticipated to result in an inefficient use of energy because gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. Energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. Therefore, construction energy impacts would be less than significant.

Operational energy-source emissions would result from activities in buildings that use electricity and natural gas. As identified above, the proposed project would comply with the 2019 California Green Building Standards Code (CALGreen Code) for energy conservation and green building standards. The proposed project would also be constructed to Title 24 standards, which would help to reduce energy and natural gas consumption. The project would be required to adhere to all federal, State, and local requirements for energy efficiency, which would substantially reduce energy usage. In addition, the proposed project would be designed to include a 3-megawatt solar system. Overall, the proposed project would be subject to renewable energy or energy efficiency measures for building design, equipment uses, and transportation. Therefore, the project would have a less than significant impact related to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. No mitigation is required.

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

No Impact. In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encourages urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

The CEC recently adopted the *2020 Integrated Energy Policy Report*. The Integrated Energy Policy Report provides the results of the CEC assessments of a variety of energy issues facing California. The City relies on the State integrated energy plan and does not have its own local plan to address renewable energy or energy efficiency.

Energy usage on the project site during construction would be temporary in nature and would represent a negligible fraction of the overall use in Orange County. In addition, energy usage associated with operation of the proposed 13-unit residential subdivision would also be a negligible fraction in comparison to the overall use in Orange County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the proposed project's total impact on regional energy supplies would be negligible, the proposed project would not conflict with or obstruct California's energy conservation plans as described in the CEC Integrated Energy Policy Report. Additionally, as demonstrated above, the proposed project would not result in the inefficient, wasteful, and unnecessary consumption of energy. Potential impacts related to conflict with or obstruction of a State or local plan for renewable energy or energy efficiency would be less than significant, and no mitigation is required.

4.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant 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. Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

The *Preliminary Geotechnical Report* (2022), prepared by LGC Geotechnical, Inc., and the *Preliminary Water Quality Assessment Report* (WQAR) prepared by MDS Consulting for the proposed project, are available in Appendices B and C, respectively. A portion of the section below is based on the results of the *Preliminary Geotechnical Report* and the WQAR.

4.7.1 Impact Analysis

a. Would the project 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.

Less Than Significant Impact. According to the California Department of Conservation, there are no known active or potentially active faults or fault traces crossing the site, nor is the site located within a currently designated Alquist-Priolo Earthquake Fault Zone (DOC 2022). The closest mapped active

fault to the project site is the Newport-Inglewood Fault, which is located approximately 6.9 miles southwest of the site.

The State of California establishes minimum standards for building design and construction through the California Building Code (CBC) (California Code of Regulations, Title 24). The CBC is based on the Uniform Building Code, which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for conditions in California. State regulations and engineering standards related to geology, soils, and seismic activity in the Uniform Building Code are reflected in the CBC requirements.

The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control. Although no active faults traverse the project site, the project would be required to comply with the requirements of the Alquist-Priolo Fault Zoning Act and the CBC. CBC requirements address structural seismic safety and include design criteria for seismic loading and other geologic hazards, including design criteria for geologically induced loading that govern sizing of structural members, building supports, and materials and provide calculation methods to assist in the design process. The CBC includes provisions for buildings to structurally survive an earthquake without collapsing and measures such as anchoring to the foundation and structural frame design. Furthermore, the proposed project would be required to prepare a Final Geotechnical Report that would provide site-specific geotechnical recommendations for proposed residential buildings, including pad compaction levels, foundation requirements, wall footing design parameters, and myriad other recommendations to ensure all buildings are constructed to appropriate engineering requirements. Following these requirements would further minimize or reduce potential safety risks to project residents and guests.

Because of the distance to the nearest fault and the magnitude of past seismic activity, the proposed project would neither negate nor supersede the requirements of the Alquist-Priolo Earthquake Fault Zoning Act, nor would the proposed project expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault as delineated on the current Alquist-Priolo Earthquake Fault Zoning Map. Therefore, impacts would be less than significant, and no mitigation is required.

ii. Strong seismic ground shaking?

Less Than Significant Impact. As with all of Southern California, the project site is subject to groundshaking resulting from earthquakes on nearby faults. Secondary effects of seismic shaking resulting from large earthquakes on the major faults in the Southern California region, which may affect the site, include ground lurching and shallow ground rupture, soil liquefaction, and dynamic settlement. As discussed previously, the site is not located within an Alquist-Priolo Earthquake Fault Zone. However, the Newport-Inglewood Fault is located approximately 6.9 miles southwest of the site and is capable of producing strong ground motion.

Seismic activity poses two types of potential hazards for people and structures, categorized as either primary or secondary hazards. Primary hazards include ground rupture, ground shaking, ground displacement, subsidence, and uplift from earth movement. Secondary hazards include ground failure

(lurch cracking, lateral spreading, and slope failure), liquefaction, water waves (seiches), movement on nearby faults (sympathetic fault movement), dam failure, and fires.

The project site is in a seismically active region and could experience ground shaking associated with an earthquake along faults in the region, including the Newport-Inglewood Fault Zone. The project site is likely to be subjected to strong ground motion from seismic activity, similar to that of the rest of Orange County and Southern California, due to seismic activity in the region as a whole. Regardless of seismic activity anticipated to occur on-site, the proposed project would be designed in accordance with CBC requirements that address structural seismic safety.

The project would be required to comply with the CBC, which includes design criteria for seismic loading and other geologic hazards. These measures include design criteria for geologically induced loading that govern sizing of structural members and provide calculation methods to assist in the design process. Thus, while shaking impacts would be potentially damaging, they would also tend to be reduced in their structural effects due to CBC criteria that recognize this potential. The CBC includes provisions for buildings to structurally survive an earthquake without collapsing and measures such as anchoring to the foundation and structural frame design. Project conformance with CBC and local requirements relative to grading and construction would ensure that the proposed project does not result in exposure of people or structures to potentially substantial adverse effects involving strong seismic ground shaking. Therefore, impacts would be less than significant, and no mitigation is required.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant with Mitigation Incorporated. Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when three general conditions coexist: (1) shallow groundwater; (2) low density non-cohesive (granular) soils; and (3) high-intensity ground motion. Studies indicate that saturated, loose near-surface cohesionless soils exhibit the highest liquefaction potential, while dry, dense, cohesionless soils and cohesive soils exhibit low to negligible liquefaction potential. In general, cohesive soils are not considered susceptible to liquefaction, depending on their plasticity and moisture content. Effects of liquefaction on level ground include settlement, sand boils, and bearing capacity failures below structures. Dynamic settlement of dry loose sands can occur as the sand particles tend to settle and densify as a result of a seismic event.

According to the California Department of Conservation and the City's General Plan, the project site is within an area prone to liquefaction (DOC 2022). The Geotechnical Evaluation Report prepared for the proposed project also indicated the potential for liquefaction, and the data obtained from field evaluations indicates that the project site contains sandy layers susceptible to liquefaction within the upper 50 feet. Table 4.7.A below depicts the estimated total and differential seismic settlement due to liquefaction potential.

Table 4.7.A: Estimated Settlement Due to Liquefaction Potential

Approximate Total Seismic Settlement	Differential Seismic Settlement
1 ½ inches	¾ inch over 40 feet

Source: *Geotechnical Evaluation Report* (LGC Geotechnical, Inc. 2022).

In order to address the liquefaction potential, proposed building foundations would be designed in accordance with engineering design standards and recommendations of the project's geotechnical reports. With implementation of Mitigation Measure MM-GEO-1 below, impacts related to potential liquefaction effects would be reduced to less than significant.

Mitigation Measures

MM-GEO-1 **Geotechnical Plan Review.** Prior to grading and building permit issuance, project construction plans shall be reviewed by the City of Garden Grove's (City) Land Development Section in order to verify that all geotechnical recommendations provided in the project's *Preliminary Geotechnical Report* (LGC Geotechnical, Inc. 2022) and the final geotechnical report are implemented to address on-site geotechnical constraints, including recommendations to address liquefaction, subsidence, and importation of expansive fill material. Recommendations outlined in the *Preliminary Geotechnical Report* to address liquefaction, subsidence, and importation of expansive material include designing post-tensioned foundations for the conservative seismic settlement due to liquefaction, as moisture conditioning of the subgrade soils prior to trenching the foundation, interconnecting any isolated structural pad footings with grade beams, evaluating foundation plans of required infiltration systems that are adjacent to foundations, and importing soils that consist of "very low" expansion potential with an expansion index of 20 or less per ASTM S4829 for general fill. The geotechnical recommendations shall be included on the grading and building plans to the satisfaction of the City.

Geotechnical observation and/or testing should be performed by the project engineer at the following stages:

- During grading (removal bottoms, fill placement, etc.);
- During utility trench backfill and compaction;
- After presoaking building pads and other concrete-flatwork subgrades, and prior to placement of aggregate base or concrete;
- Preparation of pavement subgrade and placement of aggregate base;
- After building and wall footing excavation and prior to placing steel reinforcement and/or concrete; and
- When any unusual soil conditions are encountered during any construction operation subsequent to issuance or this report.

iv. Landslides?

No Impact. Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes in areas with significant ground slopes. The project site is relatively flat, and there are no substantial hillsides or unstable slopes immediately adjacent to the site boundary. According to the California Department of Conservation, the project site is not within an area prone to landslides (DOC 2022). Therefore, the project would have no impacts related to landslides, and no mitigation is required.

b. Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Soil erosion occurs when topsoil is carried away by the physical forces of water and is relocated to an area where it builds up over time. During the construction activities of the proposed project, bare soil would be exposed, and there would be an increased potential for soil erosion compared to existing conditions. Additionally, during a storm event, soil erosion could occur at an accelerated rate. During construction, approximately 1.7 acres of area would be disturbed, and soil would be exposed during grading and other construction activities that would increase the potential for soil erosion compared to existing conditions.

The project Applicant would be required to adhere to the requirements of the General Construction Permit, which requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) to identify construction Best Management Practices (BMPs) to be implemented as part of the proposed project to reduce impacts on water quality during construction, including those impacts associated with soil erosion and siltation (e.g., dust control, fiber rolls, and storm drain inlet protection). As specified in Regulatory Compliance Measure RC-WQ-1 in Section 4.10, Hydrology and Water Quality, and in accordance with City Municipal Code, the proposed project would comply with the requirements of the Construction General Permit. With compliance with the requirements in the Construction General Permit, implementation of the construction BMPs as specified in RC-WQ-1, and in compliance with the City Municipal Code, construction impacts related to soil erosion or loss of topsoil would be less than significant. Additionally, with future landscaping and hardscape conditions on site, operation of the proposed project after construction would not result in substantial soil erosion or the substantial loss of topsoil. Therefore, the proposed project would have a less than significant impact related to substantial soil erosion or the loss of topsoil, and no mitigation is required.

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

Less Than Significant with Mitigation Incorporated. Landslides and other forms of mass wasting, including mud flows, debris flows, and soil slips, occur as soil moves downslope under the influence of gravity. Landslides are frequently triggered by intense rainfall or seismic shaking. Because the project site is in a relatively flat area, landslides or other forms of natural slope instability do not represent a significant hazard to the project site or the surrounding area. Moreover, the proposed project does not include any physical improvements that would increase risks associated with landslides on the site.

Lateral spreading is a type of liquefaction-induced ground failure associated with the lateral displacement of surficial blocks of sediment resulting from liquefaction in a subsurface layer. Once liquefaction transforms the subsurface layer into a fluid mass, gravity plus the earthquake inertial forces may cause the mass to move downslope towards a free face (such as a river channel or an embankment). Lateral spreading may cause large horizontal displacements and such movement typically damages pipelines, utilities, bridges, and structures. The analysis in the Preliminary Geotechnical Report determined that due to the site being relatively level and the lack of an adjacent free face to drive lateral spreading, the potential for lateral spreading is considered low. The project is not located on a geologic unit or soil that is anticipated to be unstable as a result of lateral spreading. Therefore, impacts related to lateral spreading would be less than significant, and mitigation is not required.

Subsidence, the sinking of the land surface due to excessive groundwater pumping in Orange County, causes loss of pore pressure as the weight of the overburden compacts the underlying sediments. As over half of the City's water supply comes from local groundwater wells accessing the Santa Ana River groundwater basin, subsidence relating to excessive groundwater withdrawal is a potential hazard. According to the Preliminary Geotechnical Report, subsidence due to earthwork operations is expected to be on the order of 0.1 foot, which excludes losses due to removal of any vegetation or debris. Although the preliminary geotechnical evaluation did not identify hazardous conditions related to the effects of any on-site subsidence, any potential significant effects related to subsidence would be avoided with implementation of Mitigation Measure MM-GEO-1.

As noted in Response 4.7 (a) (iii) above, the project is located in an area that contains liquefiable soils. In order to address the liquefaction potential, proposed building foundations would be designed in consideration of the liquefaction potential on site and dynamic seismic settlement, and Mitigation Measure MM-GEO-1 would be implemented to avoid any significant impacts related to liquefaction.

Overall, impacts related to a geologic unit or soil that is unstable or would become unstable are considered less than significant with implementation of MM-GEO-1.

d. Would the project 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 with Mitigation Incorporated. Expansive soils contain types of clay minerals that occupy considerably more volume when they are wet or hydrated than when they are dry or dehydrated. Volume changes associated with changes in the moisture content of near-surface expansive soils can cause uplift or heave of the ground when they become wet or, less commonly, cause settlement when they dry out. Soils with an expansion index (EI) of greater than 20 are classified as expansive for building purposes and, therefore, have a potentially significant impact.

Based on findings of the Preliminary Geotechnical Report, on-site soils are anticipated to have "Very Low" expansion potential (EI of 20 or less per ASTM D4829). However, imported fill material may include expansive soils if not tested prior to placement. With implementation of MM-GEO-1, direct or indirect risks to life or property due to expansive soil from imported fill material would be less significant.

e. Would the project 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. The proposed project would not involve the use of septic tanks. Wastewater from the project site would continue to discharge into the City sewer following project approval. Therefore, the proposed project would have no impact related to use of septic tanks or use of alternative wastewater disposal systems. No mitigation would be required.

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

Less than Significant with Mitigation Incorporated. According to the City's Focused General Plan Update and Zoning Amendments EIR (2021), the City contains predominantly younger alluvial deposits from geologically recent flood plain deposits. These younger alluvial deposits are from the Holocene Epoch (11,700 years ago to modern day). The project site is entirely developed, and the geotechnical analysis does not reveal the presence of, or potential for, unique geological features.

According to the project's *Preliminary Geotechnical Report*, the project site is located more specifically within the Santa Ana River drainage basin, approximately 4 miles northwest of the current channelized location of the river. In general, the site is underlain at depth by poorly consolidated alluvial sediments mapped as a sandy member of Quaternary Young Alluvial Fan deposits, ("Qyf-sand"). The Holocene to late Pleistocene aged materials are described as gravel, sand, and silt layers, deposited over broad river floodplain areas prior to channelization of the Santa Ana River. Generally, younger alluvial fan deposits are considered to have Low Paleontological sensitivity because not enough time has passed for plant and animal species to become fossilized. The potential for paleontological resources on the project site is therefore considered low due to the character of subsurface soils (Young Alluvial Fan Deposits) and because of the amount of disturbance associated with the previous development that has occurred on site. Although it is unlikely that paleontological resources would be encountered during ground-disturbing project construction activities, in order to ensure protection of unknown resources, Mitigation Measure MM-GEO-2 below requires that construction activities be halted and a qualified paleontologist be contacted in the event that unknown paleontological resources are encountered during ground-disturbing activities. With implementation of this condition, the project would ensure that significant effects to a paleontological resource or site are avoided.

Mitigation Measure

MM-GEO-2 **Paleontological Resources.** Prior to grading permit issuance, grading plans shall indicate that in the event that paleontological resources are encountered during project construction, work in the immediate area of the find shall be redirected. Subsequently, the Applicant shall retain, with the approval of the City of Garden Grove's (City) Community Development Director, or designee, a qualified paleontologist from the Orange County List of Qualified Paleontologists to assess the findings for scientific significance. If any fossil remains are discovered in sediments with a low paleontological sensitivity rating (Young Alluvial Fan Deposits), the

paleontologist shall make recommendations as to whether monitoring shall be required in these sediments on a full-time basis.

4.8 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant 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 the emissions of greenhouse gases?	☐	☐	☐	☒

The impact analysis below is based on the results of the Air Quality and Greenhouse Gas Technical Memorandum (2022), prepared by LSA for the proposed project, and included as Appendix A.

4.8.1 Impact Analysis

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

Less Than Significant Impact. Construction activities associated with the proposed project would produce combustion emissions from various sources. Construction would emit greenhouse gases (GHGs) through the operation of construction equipment and from worker and builder supply vendor vehicles for the duration of the approximately 15-month construction period. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The Southern California Air Quality Management District (SCAQMD) does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined as 30 years, added to the operational emissions, and compared to the applicable interim GHG significance threshold. Table 4.8.A shows CO_2e emissions calculations for each respective construction phase of the proposed project.

As indicated in Table 4.8.A, it is estimated that the project would generate 437.9 MT CO_2e during construction of the project. When amortized over the 30-year life of the project, annual emissions would be 14.6 MT CO_2e.

Table 4.8.A: Construction Greenhouse Gas Emissions

Construction Phase	Greenhouse Gas Emissions, CO_2e (metric tons per year)
Demolition	41.9
Site Preparation	94.7
Grading	36.1
Building Construction	223.9
Paving	20.8
Architectural Coating	20.5
Total Project Emissions	**437.9**
Total Construction Emissions Amortized over 30 years	**14.6**

Source: Compiled by LSA (May 2022).
Note: Numbers may not appear to add correctly due to rounding.
CO_2e = carbon dioxide equivalent

Long-term operation of the proposed project would generate GHG emissions from area, mobile, waste, and water sources as well as indirect emissions from sources associated with energy consumption. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site and other sources. Mobile-source GHG emissions would include project-generated vehicle trips associated with trips to the proposed project. Waste source emissions generated by the proposed project include energy generated by landfilling and other methods of disposal related to transporting and managing project-generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Because the project would begin operations in the post-2020 timeframe, the SCAQMD's 2020 numerical screening threshold of 3,000 MT CO_2e per year would need to be adjusted to reflect the State's post-2020 GHG reduction goals for the 2030 target. A scaled threshold consistent with State goals, detailed in Senate Bill (SB) 32, Executive Order (EO) B-30-15, and EO S-3-05 to reduce GHG emissions by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, respectively, was developed for 2023, when construction of the proposed project would be completed. Though the SCAQMD has not published a quantified threshold beyond 2020, this assessment uses a threshold of 2,640 MT CO_2e per year or 4.2 MT CO_2e per year per service population, which was calculated for the project operational year of 2023 based on the GHG reduction goals of SB 32 and EO B-30-15.

GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod). Table 4.8.B shows the estimated operational GHG emissions for the proposed project. Motor vehicle emissions, which are included as mobile source emissions, are the largest source of GHG emissions for the project at approximately 68 percent of the project total. Energy sources are the next largest category at approximately 23 percent. Waste sources are approximately 5 percent of the total emissions, and area and water sources are each 2 percent of the total emissions.

The project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than the scaled SCAQMD threshold of 2,640 MT CO_2e per year. Based on the analysis results, the proposed project would result in 169.0 MT CO_2e per year, which would be below

the scaled numeric threshold of 2,640 MT CO_2e per year. Therefore, operation of the proposed project would result in less than significant impacts related to generating GHG emissions, and no mitigation is required.

Table 4.8.B: Greenhouse Gas Emissions

Emission Type	Operational Emissions (metric tons per year)				
	CO_2	CH_4	N_2O	CO_2e	Percentage of Total
Area Source	3.0	<1	<1	3.1	2
Energy Source	34.6	<1	<1	34.8	23
Mobile Source	103.7	<1	<1	105.2	68
Waste Source	3.1	<1	0	7.6	5
Water Source	3.0	<1	<1	3.7	2
Total Operational Emissions				**154.4**	**100.0**
Amortized Construction Emissions				14.6	—
Total Annual Emissions				**169.0**	**—**
SCAQMD Tier 3 GHG Numerical Screening Threshold for 2023				**2,640.0**	
Exceedance?				**No**	

Source: LSA (May 2022).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
GHG = greenhouse gas
N_2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

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

No Impact. The City of Garden Grove does not have an adopted climate action plan or GHG reduction plan. Therefore, the proposed project was analyzed for consistency with the goals of Assembly Bill (AB) 32, the AB 32 Scoping Plan, B-30-15, 32, and AB 197 and Southern California Association of Governments' (SCAG) 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

CARB Scoping Plan. AB 32 is aimed at reducing GHG emissions to 1990 levels by 2020. AB 32 requires CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The 2017 Scoping Plan has a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, market-based mechanisms (e.g., cap-and-trade system), and an AB 32 implementation fee to fund the program.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reduction target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. As identified above, the 2017 Scoping Plan contains GHG

reduction measures that work towards reducing GHG emissions, consistent with the targets set by AB 32 and EO B-30-15, and codified by SB 32 and AB 197.

In addition, the Draft 2022 Scoping Plan Update[1] assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The measures applicable to the proposed project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as discussed below. The proposed project would comply with the 2019 California Green Building Standards Code (CALGreen Code) standards, regarding energy conservation and green building standards. In addition, the proposed project would be designed to include a 3-megawatt solar system. Therefore, the proposed project would comply with applicable energy measures. In addition to the requirement for the project to be compliant with the 2019 CALGreen Code standards, which include measures related to the reduction of wastewater and water use, the proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance and would include low-flow plumbing fixtures, and drip irrigation systems. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. However, vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

The proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32, the AB 32 Scoping Plan, EO B-30-15, SB 32, and AB 197.

SCAG's RTP/SCS. SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) identifies that land use strategies that focus on new housing and job growth in areas served by high-quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2020–2045 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit-oriented communities. The 2020–2045 RTP/SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the 2020–2045 RTP/SCS but provides incentives for consistency for governments and developers.

[1] CARB. 2021. *Draft 2022 Scoping Plan Update*. May 10. Website: https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf (accessed September 2022).

The proposed project would not conflict with the stated goals of the RTP/SCS; therefore, the proposed project would not interfere with SCAG's ability to achieve the region's GHG reduction targets at 8 percent below 2005 per capita emissions levels by 2020 and 19 percent below 2005 per capita emissions levels by 2035, and it can be assumed that regional mobile emissions will decrease in line with the goals of the RTP/SCS. Furthermore, the proposed project is not regionally significant per *State CEQA Guidelines* Section 15206, and, as such, it would not conflict with the SCAG RTP/SCS targets since those targets were established and are applicable on a regional level. Therefore, the proposed project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions, and there would be no impact. No mitigation is required.

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4.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant 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 one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 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?	☐	☐	☐	☒

The impact analysis below is based on the results of the *Phase I Environmental Site Assessment* (ESA) (2022), prepared by Ardent Environmental Group for the proposed project, and included as Appendix D.

4.9.1 Impact Analysis

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

No Impact. A Phase I ESA was prepared for the proposed project to evaluate whether hazardous substances or petroleum products were being used or stored on the project site. Hazardous substances include substances defined by the CERCLA as hazardous as well as substances that occur naturally or through biological digestion, and substances about which human understanding is evolving such as "emerging contaminants". The project site is entirely developed with single-family residential uses. According to the Phase I ESA, no use, storage, or disposal of hazardous substances, hazardous wastes, or petroleum products were observed. The proposed project is a single-family residential development consisting of 13 homes and associated improvements. These residential uses would not create a significant hazard to the public or environment through the routine transport, use,

or disposal of hazardous materials. Therefore, no related impact is anticipated, and no mitigation is necessary.

b. Would the project 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?

No Impact. The proposed project would involve construction activities including removal of existing pavement, grading, site preparation, and landscaping associated with existing single-family residential uses. During construction activities that would redevelop the project site, the Applicant would be required to comply with relevant applicable federal, state, and local laws and regulations that pertain to hazardous materials and waste during construction and operation of the proposed project.

According to the Phase I ESA, there is no evidence of releases (i.e., stained soil or surfaces or stressed vegetation) or threatened releases of hazardous substances on, at, in, or to the project site. Therefore, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and there would be no impacts. No mitigation is required.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The two nearest existing schools to the project site are Stanford Elementary School and Hare High School, located approximately 0.3 mile south and north of the project site, respectively. Additionally, there are no proposed schools within 0.25 mile of the proposed project area. Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

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

No Impact. Government Code Section 65962.5 refers to the Hazardous Waste and Substances Site List, commonly known as the Cortese List, maintained by the State of California Department of Toxic Substances Control (DTSC). The Cortese List identifies hazardous waste and substance sites including public drinking water wells with detectable levels of contamination; sites with known USTs having a reportable release; and solid waste disposal facilities from which there is a known migration. The Cortese List also includes hazardous substance sites selected for remedial action; historic Cortese sites; and sites with known toxic material identified through the abandoned site assessment program. Review of the EnviroStor database indicates that the project site is not on a list of hazardous materials sites compiled pursuant to Government Code §65962.5.

However, former operations in several properties in the proposed project vicinity indicate that there may potentially be residual contaminants in the proposed project area. One property, located approximately 0.9 mile west of the site at 8141 Lampson Avenue, Stanton, was listed on the Clandestine Drug Labs (CDL) database as a location where an illegal drug lab was operated and/or

drug lab equipment/materials were stored. The second facility, located approximately 2-miles north of the site at 10502 Magnolia Avenue South, Stanton, was listed on the Leaking Underground Storage Tanks (LUST) database due to methyl-tert-butyl-ether (MTBE) contamination released from a piping run, with a discovery date of January 15, 1992. Based on the distance, direction, and/or type of facility, these listings would not be considered an environmental concern to the site. Therefore, the proposed project would not have an impact and would not create a significant hazard to the public or the environment as it relates to being located on a site which is included in a list of hazardous materials sites. No mitigation is necessary.

e. Would the project be 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. The proposed project is not within an airport land use plan or within 2 miles of a public airport of public use airport, and therefore would not result in impacts to safety or excessive noise for people residing or working in the project area. No mitigation is required.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed project is served by the Garden Grove Police Department, which implements the Emergency Operations Plan (EOP) (City of Garden Grove 2021a). The proposed project consists of the demolition of all existing structures and landscaping on the project site and the development of 13 residential units with private recreational areas, an open space parcel, and two private streets. Although Lampson Avenue is a designated emergency evacuation route as articulated in the City's General Plan Safety Element, no roadway closures or lane closures are anticipated as part of Project construction, and traffic volumes resulting from construction vehicles would not impede traffic flow. Therefore, implementation of the proposed project would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant. No mitigation is required.

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

No Impact. According to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP), the proposed project is not located within or near a High or Very High Fire Hazard Severity Zone in either a State Responsibility Area or a Local Responsibility Area (CAL FIRE 2020). Therefore, the proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. There would be no potential impacts associated with wildland fires, and no mitigation is necessary.

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4.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant 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 groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
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?	☐	☐	☒	☐

The analysis in this section is based on the Preliminary Water Quality Assessment Report (MDS Consulting May 2022) and the Preliminary Drainage Study (MDS Consulting May 2022) prepared for the proposed project. These reports are provided in Appendix C.

4.10.1 Impact Analysis

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less Than Significant Impact. The proposed project involves the demolition of three single-family residential homes and a small accessory building and construction of 13 single-family residential lots with private recreational areas, an open space parcel, and two private streets. Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked and have the

potential to be transported via stormwater runoff into receiving waters (i.e., Bolsa Chica Channel and Anaheim Bay) (MDS Consulting, 2022).

During construction, the disturbed soil area would be approximately 1.7 acres. Because construction of the proposed project would disturb greater than 1 acre of soil, as specified in Regulatory Compliance Measure RC-WQ-1, the Project is subject to the requirements of the SWRCB's NPDES permit *Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities* (Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Orders No. 2010-0014-DWQ and 2012-0006-DWQ) (Construction General Permit). The Construction General Permit (CGP) requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of BMPs during construction activities. Construction BMPs would include, but not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on-site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. In addition, as specified in Regulatory Compliance Measure RC-WQ-2, the proposed project must comply with the City's Municipal Code (Title 6 Section 6.40.05 Controls for Water Quality Management) which requires compliance with the DAMP (Drainage Area Management Plan).[2] Compliance with the DAMP requires compliance with the CGP and the preparation of a SWPPP to implement BMPs that can significantly control pollution from construction sites. As required by RC-WQ-1 and RC-WQ-2, prior to approval of a grading or building permit, the proposed project would be required to obtain coverage under the CGP, including preparation of a SWPPP, which will specify construction BMPs to be implemented during construction to target pollutants of concern. Therefore, implementation of RC-WQ-1 and RC-WQ-2 would ensure construction impacts related to surface water quality standards and waste discharge requirements would be less than significant. No mitigation is required.

According to the Geotechnical Evaluation Report prepared for the project (LGC 2022), groundwater was encountered during exploratory borings at depths at 14 feet (ft) below ground surface (bgs). Excavation associated with the proposed project is anticipated to reach a maximum depth of 8 ft bgs. Therefore, groundwater dewatering is not anticipated to be required during construction. However, due to the relatively shallow site groundwater, construction activities may require groundwater dewatering. As specified in Regulatory Compliance Measure WQ-3, If dewatering is required, the Applicant would be required to seek cover under the *General Waste Discharge Requirements For Discharges To Surface Waters That Pose An Insignificant (De Minimis) Threat To Water Quality (Groundwater Discharge Permit),* Order No. R8-2020-0006, NPDES No. CAG998001. This order requires water sampling, analysis, treatment (if required), and reporting of dewatering related discharges of groundwater extracted during construction prior to its release into surface waters to ensure that effluent limitations for constituents are not exceeded. As a result, groundwater dewatering during project construction would not introduce pollutants into receiving waters or violate water quality standards or waste discharge requirements. Therefore, if groundwater dewatering is required, adherence to the Groundwater Discharge Permit as outlined in RC-WQ-3

[2] The Drainage Area Management Plan is a cooperative project of the County of Orange, the cities of Orange County and the Orange County Flood Control District. It is a policy, programmatic guidance, and planning document for the Orange County Stormwater Program for the management and protection of Orange County's streams, rivers, creeks, and coastal waters. (2007 Orange County Drainage Area Management Plan).

would ensure that the proposed project would not violate any water quality standards or waste discharge requirements and impacts to water quality would be less than significant. No mitigation is required.

Pollutants of concern from long-term operations include pathogens (bacteria/viruses), metals, nutrients, toxic organic compounds, pesticides/herbicides, sediments/total suspended solids, trash and debris, and oil and grease (MDS Consulting 2022). The proposed project involves removing 3 existing residential units and constructing 13 new residential units on an approximately 1.6-acre project site. The project also includes the construction of private streets and driveways, sidewalks, and open space. The proposed project would increase the amount of impervious surface area on site by approximately 11,500 sf (approximately 40 percent increase) over existing conditions.

As specified in Regulatory Compliance Measure WQ-4, the project would comply with the requirements of the California Regional Water Quality Control Board, Santa Ana Region, *Waste Discharge Requirements for The County of Orange, Orange County Flood Control District and The Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff* (Orange County MS4 Permit), Order No. R8-2009-0030, NPDES Permit No. CAS618030, as amended by Order No. R8-2010-0062. The Orange County Flood Control District, the County of Orange, and incorporated cities, including the City of Garden Grove, are subject to the Orange County MS4 permit. The Orange County MS4 permit requires that a WQMP be prepared for priority new development and redevelopment projects. The proposed project is considered a priority new development project because it adds more than 10,000 sf of new impervious surface.

WQMPs specify the Site Design, Source Control, Low Impact Development (LID), and Treatment Control BMPs that would be implemented to capture, treat, and reduce pollutants of concern in stormwater runoff. Site Design BMPs are stormwater management strategies that emphasize conservation and use of existing site features to reduce the amount of runoff and pollutant loading generated from a project site. Source Control BMPs are preventative measures that are implemented to prevent the introduction of pollutants into stormwater. LID BMPs mimic a project site's natural hydrology by using design measures that capture, filter, store, evaporate, detain, and infiltrate runoff rather than allowing runoff to flow directly to piped or impervious storm drains. Treatment Control BMPs are structural BMPs designed to treat and reduce pollutants in stormwater runoff prior to releasing it to receiving waters. In compliance with the Orange County MS4 Permit, MDS Consulting prepared a Preliminary WQMP, which provides details regarding the proposed project's stormwater management program, including proposed BMPs to reduce or eliminate pollutants of concerns in stormwater runoff and on-site water infiltration basins. According to the Preliminary WQMP, stormwater runoff will be conveyed as surface flow southerly down the proposed drive aisle until it is captured by the curb and gutter on the easterly and westerly sides of the proposed drive aisle. From there, it will continue flowing south until it is captured by an on-site catch basin. Runoff from the catch basin will flow through pipes to infiltration basins for treatment. The on-site infiltration basins will infiltrate treated stormwater on site and the stormwater overflow would be conveyed to a 60-inch public storm drain under Lampson Avenue and then to Bolsa Chica Channel where stormwater outlets to Anaheim Bay and ultimately the Pacific Ocean. According to the Preliminary WQMP, the proposed project will include the following site design principles, structural and non-structural controls, and

stormwater quality control measures to reduce and/or eliminate pollution from entering the storm drain system:

- Infiltration basins;
- Education for property owners, tenants, and occupants;
- Activity restrictions;
- Common area landscape management;
- BMP maintenance;
- Title 22 CCR compliance;
- Spill Contingency Plan;
- Uniform Fire Code implementation;
- Common Area litter control;
- Common area catch basin inspection;
- Street sweeping for private streets and parking lots;
- Provide storm drain system stenciling and signage;
- Use efficient irrigation systems and landscape design, water conservation, smart controllers, and source control;
- Incorporate requirements applicable to individual priority project categories.

As discussed above and specified in RC-WQ-4, the proposed project would comply with the Orange County MS4 Permit which requires the preparation of a Final WQMP and implementation of operational BMPs to target and reduce pollutants of concern in stormwater runoff from the project site. Compliance with the Orange County MS4 Permit would reduce operational impacts related to surface water quality standards, waste discharge requirements, and/or degradation of water quality to a less than significant level, and no mitigation is required.

Infiltration of stormwater has the potential to affect groundwater quality in areas of shallow groundwater. As discussed above, groundwater could occur at depths below 14 ft bgs. According to the *Preliminary WQMP* the majority of on-site soils are in Soil Group A and favorable for infiltration. Under current conditions approximately 63 percent of the project site is pervious surface area. The proposed project would increase the amount of impervious surface area by 40 percent (approximately 11,500 sf) compared to existing conditions. Increasing the total impervious surface area decreases the ability for stormwater to infiltrate into the groundwater. The proposed project would implement BMPs to capture and treat stormwater from impervious surfaces, direct it to an infiltration basin where it would be treated before percolating into the soil and thereby prevent potentially contaminated stormwater runoff from reaching groundwater. Any stormwater that exceeds the capacity of the infiltration basins would be conveyed to the public storm drain system via curbs, gutters and catch basins and would not infiltrate the soil. Therefore, untreated overflow stormwater would not infiltrate onsite and would be conveyed to the City storm drain system. According to the

Preliminary Drainage Study (MDS Consulting 2022), the proposed drainage plan, including the streets, storm drain system, and basins, was designed using the methodology outlined in the Orange County Hydrology Manual and are sized to handle the increase in flows in the post-project condition. Therefore, implementation of the proposed project would not violate groundwater quality standards, waste discharge requirements, and/or degradation of groundwater quality, impacts would be less than significant, and no mitigation would be required.

Standard Conditions and Regulatory Compliance Measures

RC-WQ-1 **Construction General Permit.** Prior to issuance of a grading permit, the Applicant or designee shall obtain coverage under the *State Water Resources Control Board National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System No. CAS000002, as amended by Orders No. 2010-0014-DWQ and 2012-0006-DWQ)* (Construction General Permit). This shall include the submission of Permit Registration Documents (PRDs), including a Notice of Intent (NOI) for coverage under the permit to the State Water Resources Control Board (SWRCB) via the Stormwater Multiple Application and Report Tracking System (SMARTS). The Applicant shall provide the Waste Discharge Identification Number (WDID) to the City of Garden Grove (City) to demonstrate proof of coverage under the Construction General Permit. A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the proposed project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction best management practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in stormwater runoff as a result of construction activities (e.g., dust control, fiber rolls, and storm drain inlet protection). Construction Site BMPs shall also conform to the requirements specified in the latest edition of the Orange County Stormwater Program *Construction Runoff Guidance Manual for Contractors, Project Owners, and Developers* to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. Upon completion of construction and stabilization of the site, a Notice of Termination will be submitted via SMARTs.

RC-WQ-2 **City of Garden Grove Municipal Code.** Prior to issuance of grading or building permits or prior to recordation upon subdivision of land, the Applicant or designee shall submit final project plans to the City for review and approval, which address compliance with the water quality management requirements of Title 6 Section 6.40.05 Controls for Water Quality Management of the City of Garden Grove Municipal Code.

RC-WQ-3 **Orange County Groundwater Discharge Permit.** At least 45 days prior to groundwater dewatering activities, the Applicant or designee shall submit an NOI to the Santa Ana Regional Water Quality Control Board (RWQCB) to obtain coverage under the *General Waste Discharge Requirements for Discharges to Surface Waters That Pose an Insignificant (De Minimis) Threat to Water Quality* (Groundwater

Discharge Permit), Order No. R8-2020-0006, NPDES No. CAG998001. The construction contractor shall comply with the requirements of Order No. R8-2020-0006, NPDES No. CAG998001. Groundwater dewatering activities shall comply with all applicable provisions in the Groundwater Discharge Permit, including water sampling, analysis, treatment (if required), and reporting of dewatering-related discharges. Upon completion of groundwater dewatering activities, a Notice of Termination (NOT) shall be submitted to the Santa Ana RWQCB.

RC-WQ-4 **Orange County MS4 Permit.** Prior to issuance of grading or building permits or prior to recordation upon subdivision of land, the Applicant or designee shall submit a Final Water Quality Management Plan (WQMP) to the City of Garden Grove, for review and approval, in compliance with the *Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff Orange County*, (Orange County MS4 Permit) Order No. R8-2009-0030, NPDES No. CAS618030, as amended by Order No. R8-2010-0062. The Final WQMP shall be prepared consistent with the requirements of the *Model Water Quality Management Plan (WQMP*) (County of Orange 2011), *Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (WQMPs)* or subsequent guidance manuals. The Final WQMP shall specify the BMPs to be incorporated into the project design to target pollutants of concern in runoff from the project site. The Director of the City of Garden Grove Public Works Department, or designee, shall ensure that the BMPs specified in the Final WQMP are incorporated into the final project design.

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

Less Than Significant Impact. According to the Geotechnical Evaluation Report prepared for the Project (LGC 2022), groundwater was encountered during exploratory borings at depths at 14 feet (ft) below ground surface (bgs). Excavation associated with the proposed project is anticipated to reach a maximum depth of 8 ft bgs. Although not anticipated, if dewatering is required it would be conducted in accordance with the requirements of the Groundwater Discharge Permit, Order No. R8-2020-0006, NPDES No. CAG998001, as specified in Regulatory Compliance Measure RC-WQ-3 Groundwater dewatering would be localized and temporary, and the volume of groundwater removed would not be substantial. In addition, any volume of water removed during groundwater dewatering would be minimal compared to the size of the Coastal Plain of the Orange County Groundwater Basin, which has a surface area of 350 square miles and a storage capacity of 38,000,000 acre-feet (af) (California DWR 2004). Groundwater dewatering would not interfere with the sustainable management of the groundwater basin because the groundwater basin has been sustainably managed over the last 10 years and will continue to be sustainably managed (refer to Response 4.10 (a) for additional discussion on sustainable groundwater management). Therefore, construction impacts related to depletion of groundwater supplies or interference with groundwater recharge would be less than significant, and no mitigation would be required.

In its existing condition, the project site includes three single-family residential homes and a small accessory building. According to the Preliminary WQMP, development of the project would increase impervious surface area on the project site by approximately 11,500 sf (approximately 40 percent increase), which would decrease opportunities for infiltration and groundwater recharge. Impervious surfaces preclude groundwater infiltration and thereby interfere with groundwater recharge. However, the proposed project includes two infiltration basins that would treat runoff from impervious surface areas and allow it to infiltrate back into the soil, which would allow for continued groundwater recharge and partially offset the reduction in infiltration from new impervious surface areas. Therefore, the proposed project would not substantially interfere with groundwater recharge. Project operations would not require groundwater extraction. While the project would increase water use, which may be obtained from groundwater, the Orange County Water District ensures that sufficient water supplies are available so that groundwater overdraft does not occur.[3] For these reasons, impacts related to depletion of groundwater supplies or interference with groundwater recharge in a manner that may impede sustainable groundwater management would be less than significant, and no mitigation would be required

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

i. Result in substantial erosion or siltation on- or off-site;

Less Than Significant Impact. During construction activities, approximately 1.7 acres of area would be disturbed. Soil would be exposed and drainage patterns would be temporarily altered during grading and other construction activities, and there would be an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. As discussed above under Response 4.10 (a), the Construction General Permit requires the preparation of a SWPPP to identify construction BMPs to be implemented as part of the proposed project to reduce impacts on water quality during construction, including those impacts associated with soil erosion and siltation. As specified in RC-WQ-1 and RC-WQ-2, the proposed project would comply with the requirements of the Construction General Permit and the City of Garden Grove Municipal Code. With compliance with the requirements in the Construction General Permit and implementation of the construction BMPs as specified in RC-WQ-1 and RC-WQ-2, construction impacts related to on- or off-site erosion or siltation would be less than significant, and no mitigation is required.

In the proposed condition, 40,603 sf (58.2 percent) of the project site would be impervious surface area and not prone to on-site erosion or siltation because no soil would be included in these areas. The remaining 41.9 percent of the site would consist of pervious area, which would contain landscaping that would minimize on-site erosion and siltation by stabilizing the soil. Therefore, on-site erosion and siltation impacts would be minimal. However, the proposed project would increase impervious area on the project site, which would result in a net increase in stormwater runoff that can lead to downstream erosion in receiving waters (Bolsa Chica Channel). The Bolsa Chica Channel, however, is a completely stabilized concrete channel and therefore not susceptible to

[3] Orange County Water District. 2017. *Basin 8-1 Alternative – OCWD Management Area.*

hydromodification. Therefore, the project is not required to implement hydromodification performance measures. Additionally, as specified in RC-WQ-4, in compliance with the Orange County MS4 Permit requirements and the Orange County DAMP, infiltration basins would remove debris and sediment prior to stormwater runoff entering the project's storm drain system. Therefore, operation impacts related to substantial on- or off-site erosion or siltation would be less than significant, and no mitigation is required.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Less Than Significant Impact. As discussed under Response 4.10 (a), project construction would comply with the requirements of the Construction General Permit and would include the preparation and implementation of a SWPPP. The SWPPP would include construction BMPs to control and direct on-site surface runoff to ensure that stormwater runoff from the construction site does not exceed the capacity of the stormwater drainage systems. With implementation of BMPs, construction impacts related to a substantial increase in the rate or amount of surface runoff that would result in flooding would be less than significant, and no mitigation is required.

In the existing condition approximately 63 percent of the project site is pervious surface area and utilizes natural infiltration. For the remaining portion of the project site, stormwater runoff sheet flows from north to south, where it is eventually captured by the public curb and gutter along the north side of Lampson Avenue.

The proposed project would increase the amount of impervious surface from 29,188 sf to 40,603 sf (16.3 percent), which would increase the stormwater runoff generated by the project site. The proposed stormwater drainage plan would divide the project site into two almost equal-sized drainage areas. Drainage Management Area (DMA)-1 would collect stormwater from the western half of the project site and DMA-2 would collect stormwater from the eastern half of the project site. Stormwater runoff from each of the DMAs would flow south until captured by the curb and gutter on the easterly (DMA-2) and westerly (DMA-1) sides of the proposed drive aisle. Once captured by the curb and gutter, drainage would continue to flow south until captured by on site catch basins and to infiltration basins for treatment. Overflow would be conveyed south to the public curb and gutter on Lampson Avenue and then west to the public catch basin located near the Magnolia and Lampson Avenue intersection. The infiltration basins would allow treated stormwater to be infiltrated and the overflow that is sent to the public storm drain system would ultimately be conveyed to the Bolsa Chica Channel and eventually to Anaheim Bay. The proposed project would increase flows in DMA-1 by 0.11 cubic feet per second (cfs), 0.13 cfs, and 0.15 cfs for the 10-year, 25-year, and 100-year storm events, respectively. DMA-2 flows would be increased by 0.15 cfs, 0.18 cfs, and 0.23 cfs, for the 10-year, 25-year, and 100-year storm events, respectively.

According to the Preliminary Drainage Study (MDS Consulting 2022), the proposed drainage plan, including the streets, storm drain system, and basins, was designed using the methodology outlined in the Orange County Hydrology Manual are sized to handle the increase in flows in the post-project condition. Because the on-site drainage systems and stormwater BMPs would be sized to collect and convey stormwater

runoff on the project site, proposed project impacts related to on- or off-site flooding from an increase in surface runoff would be less than significant, and no mitigation is required.

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

Less Than Significant Impact. As discussed under Response 4.10 (a), pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. Drainage patterns would be temporarily altered during grading and other construction activities, and construction-related pollutants could be spilled, leaked, or transported via storm runoff into adjacent drainages and downstream receiving waters. However, as specified in RC-WQ-1, the proposed project would be required to comply with the requirements set forth by the Construction General Permit and SWPPP, which would specify BMPs to be implemented to control the discharge of pollutants in stormwater runoff as a result of construction activities. Additionally, as discussed under Response 4.10 (c)(ii), the SWPPP would include construction BMPs to control and direct surface runoff on site to ensure that stormwater runoff from the construction site does not exceed the capacity of the stormwater drainage systems. Furthermore, any groundwater extracted during groundwater dewatering activities that is discharged to surface waters must meet the water quality limits specified in the applicable NPDES permit, as specified in RC-WQ-3.

For these reasons, with implementation of RC-WQ-1 and RC-WQ-3, construction impacts related to creation or contribution of runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff would be less than significant, and no mitigation is required. The operation of the proposed project has the potential to introduce pollutants to the storm drain system from the proposed on-site uses. As discussed under Response 4.10 (a), expected pollutants of concern from long-term operations include pathogens (bacteria/viruses), metals, nutrients, toxic organic compounds, pesticides/herbicides, sediments/total suspended solids, trash and debris, and oil and grease. As required by RC-WQ-2 and RC-WQ-4, the WQMP would require the implementation of operational BMPs to reduce pollutants of concern in stormwater runoff. With implementation of operational BMPs, no substantial additional sources of polluted runoff would be discharged to the storm drain system.

Development of the proposed project would increase impervious surface area on the project site by a total of approximately 11,500 sf, which would increase stormwater runoff generated during project operation. The proposed project would install new storm drains, catch basins, and utilize onsite infiltration. As discussed in the Preliminary WQMP, on-site drainage facilities would be adequately sized to convey and reduce runoff, such that on-site and off-site drainage facility capacity would not be exceeded during a design storm. Therefore, the proposed project would not result in an exceedance of planned or existing stormwater drainage systems.

For the reasons discussed above, with adherence to Regulatory Compliance Measures RCM-WQ-2 and RCM-WQ-4, operational project impacts associated with the introduction of substantial sources of

polluted runoff or additional runoff would be less than significant and would not result in an exceedance in capacity of existing or planned stormwater drainage systems. No mitigation is required.

iv. Impede or redirect flood flows?

Less Than Significant Impact. The project site is not located within a Federal Emergency Management Agency (FEMA) designated 100-year floodplain. According to the FEMA Flood Insurance Rate Map (FIRM) No. 06059C0136J, the project site is located within Zone X (FEMA 2009). Zone X is designated as an area determined to be outside the 500-year floodplain. As the proposed project would not place improvements and structures directly within a 100-year floodplain, the proposed project would not impede or redirect flood flows. Therefore, impacts related to impeding or redirecting of flood flows would be less than significant, and no mitigation would be required.

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

No Impact. Tsunamis are ocean waves generated by tectonic displacement of the seafloor associated with shallow earthquakes, seafloor landslides, rock falls, and exploding volcanic islands. Tsunamis can have wavelengths of up to 120 miles and travel as fast as 500 miles per hour across hundreds of miles of deep ocean. Upon reaching shallow coastal waters, the waves can reach up to 50 ft in height, causing great devastation to near-shore structures. The project site is located approximately 7.25 miles from the Pacific Ocean shoreline. According to the Department of Conservation Orange County Tsunami Hazard Areas Map (DOC 2021), the project site is located outside of the tsunami hazard area. Therefore, the project site would not be not subject to inundation from tsunamis, and there would be no risk of release of pollutants due to inundation from tsunami.

Seiching occurs when seismic ground shaking induces standing waves (seiches) inside water retention facilities (e.g., reservoirs and lakes). Such waves can cause retention structures to fail and flood downstream properties. The closest water retention facility to the project site is the West Street Basin located approximately 2.9 miles east of the project site. This water retention facility is quite small and distant from the project site and therefore does not cause a risk of inundation from seiche. Therefore, the project site would not be subject to inundation from seiche waves, and there would be no risk of release of pollutants due to inundation from seiche.

As discussed under Response 4.10 (c)(iv), the project site is located within Zone X (designated as an area determined to be outside the 500-year floodplain). The project would not change existing land uses on the project site compared to existing conditions. The proposed project would increase the number of residential units and include a small portion of open space; however, existing pollutants of concern are not anticipated to change due to land use changes. As discussed under Response 4.10 (a), BMPs would be implemented to target and reduce pollutants of concern on the project site. In addition, as previously discussed in Section 4.9, Hazards and Hazardous Materials, hazardous substances associated with residential uses would be limited in both amount and use. The materials used on site would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. There are no levees within the vicinity of the project site and as discussed above there are no water bodies within the vicinity of the project site that would pose a risk of flooding. Furthermore, because BMPs would reduce the

introduction of pollutants on the site and any hazardous materials used on site would be properly stored and contained, there would be a low potential for pollutants to be released from the project site in the unlikely event of inundation of the project site. Therefore, there would be no impacts related to release of pollutants in the event of inundation from flooding. No mitigation is required.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The project is within the jurisdiction of the Santa Ana RWQCB. The Santa Ana RWQCB adopted a Water Quality Control Plan (i.e., Basin Plan) (1995, last updated February 2016) which designates beneficial uses for all surface and groundwater within its jurisdiction and establishes the water quality objectives and standards necessary to protect those beneficial uses. As summarized below, the project would comply with the applicable NPDES permits and would implement construction and operational BMPs to reduce pollutants of concern in stormwater runoff.

As discussed under Response 4.10 (a), during construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported via stormwater runoff into receiving waters. As specified in Regulatory Compliance Measure RC-WQ-1, the proposed project would be required to comply with the requirements set forth by the Construction General Permit, which requires the preparation of a SWPPP and implementation of construction BMPs to control stormwater runoff and discharge of pollutants.

As discussed under Response 4.10 (a), the primary pollutants of concern during project operations are pathogens (bacteria/viruses), metals, nutrients, toxic organic compounds, pesticides/herbicides, sediments/total suspended solids, trash and debris, and oil and grease. As stated under Response 4.10 (a), a final WQMP would be prepared for the project in compliance with the Orange County MS4 Permit and the DAMP. The Final WQMP would detail the Site Design, Source Control, and/or Treatment Control BMPs that would be implemented to treat stormwater runoff and reduce impacts to water quality during operation. The proposed BMPs would capture and treat stormwater runoff and reduce pollutants of concern in stormwater runoff.

The proposed project would comply with the applicable NPDES permits, which require the preparation of a SWPPP, preparation of a Final WQMP, and implementation of construction and operational BMPs to reduce pollutants of concern in stormwater runoff. As such, the project would not result in water quality impacts that would conflict with Santa Ana RWQCB's Water Quality Control Plan (Basin Plan). Impacts related to conflict with a water quality control plan would be less than significant, and no mitigation is required.

The Sustainable Groundwater Management Act (SGMA) was enacted in September 2014. SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft of groundwater basins. SGMA requires the formation of local Groundwater Sustainability Agencies (GSAs), which are required to adopt Groundwater Sustainability Plans to manage the sustainability of the groundwater basins. The project site is located within the Coastal Plain of Orange County Groundwater Basin, which is managed by the Orange County Water District (OCWD) (DWR 2004). The

Coastal Plain of Orange County Groundwater Basin is identified by the Department of Water Resources as a medium priority basin; therefore, development of a Groundwater Sustainability Plan is required. In compliance with this requirement, OCWD prepared and submitted the *Basin 8-1 Alternative – OCWD Management Area* (OCWD 2017) to the California DWR as an alternative to a Groundwater Sustainability Plan (California DWR 2019). The *Basin 8-1 Alternative – OCWD Management Area* demonstrates that the groundwater basin has been sustainably managed over the last 11 years and will continue to be sustainably managed. As discussed under Responses 5.10.1 a. and b., the proposed project does not have the potential to impact groundwater quality, interfere with groundwater recharge, or decrease groundwater supplies. Any groundwater extracted during groundwater dewatering during construction would be minimal and would not interfere with the sustainable management of the groundwater basin. Additionally, project operation would not require groundwater extraction. Although the project would increase water use, which may be obtained from groundwater, the OCWD, ensures that sufficient water supplies are available so that groundwater overdraft does not occur. For these reasons, the proposed project would not conflict with or obstruct the implementation of a sustainable groundwater management plan. Therefore, no impact would occur related to conflict with or obstruction of water quality control plans or sustainable groundwater management plans, and no mitigation is required.

4.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

4.11.1 Impact Analysis

a. Would the project physically divide an established community?

No Impact. The proposed project consists of Assessor's Parcel Numbers (APNs) 133-183-55, 133-183-56, 133-183-57, and 133-183-58 that, when combined, are approximately 1.6 acres. The project site is primarily surrounded by single-family residential uses to the north, south, and east and multifamily residential uses to the west. The proposed project consists of the demolition of four existing structures (three single-family residential units and one accessory building) on the project site and the development of 13 residential lots with private recreational areas, an open space parcel, and two private streets. The proposed project area is located in a highly urbanized area and is surrounded by residential, commercial, and institutional uses. The proposed project would be a relatively small infill development that would not add any new roadways or structures that would divide or disrupt neighborhoods or communities, and it would not physically divide an established community. No impacts would occur. No mitigation is required.

b. Would the project 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?

No Impact. The proposed project area has a General Plan land use designation of low density residential. General Plan land use designations surrounding the project site include low density residential, low medium density residential, and office professional. The proposed project is consistent with the General Plan land use designations for the project site. Implementation program LU-IMP-2B of the City's General Plan Land Use Element states that, "New development shall be similar in scale to the adjoining residential neighborhood to preserve its character."

The proposed project includes the demolition of four existing structures (three single-family residential units and one accessory building) and the construction of 13 single-family homes. The project site is currently designated as low-density residential. The low-density residential designation is intended to create, maintain, and enhance residential areas characterized by detached, single unit structures, and single-family residential neighborhoods. There would be no change in use of the project site, which would continue to operate in a low-density residential capacity. Therefore, the proposed project would be consistent the LU-IMP-2B implementation program, would comply with

the intent of the City's General Plan land use designation, and would be similar in scale to the surrounding residential neighborhood in the project area.

The proposed project would not conflict with any applicable land use plans, policies, or regulations that have been adopted for the purpose of avoiding or mitigating environmental effects. As indicated in Section 4.8, the proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32, the AB 32 Scoping Plan, EO B-30-15, SB 32, and AB 197. The project would also be compliant with the SCAG Connect SoCal 2020-2045 RTP/SCS. Further, the proposed project would be consistent with City policies related to construction hours specified in the Noise Ordinance in the City of Garden Grove's Municipal Code Section 8.47.040 and Policy N – 1.1 of the City's General Plan Noise Element policies related to minimizing the noise impacts on residences from construction activities that take place in or near residential neighborhoods. The proposed project would also be consistent with City policies specified in the General Plan Circulation Element related to reduced vehicle trips (Goal CIR-4), alternative forms of transportation (Goal CIR-5), access and traffic flow in parking areas (Goal CIR-7), attractive streetscapes (Goal CIR-9), and traffic operations (Goal CIR-1). No impacts related to conflicts with land use plans or policies would occur, and no mitigation is required.

4.12 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

4.12.1 Impact Analysis

a. Would the project 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. In 1975, the California Legislature enacted the Surface Mining and Reclamation Act (SMARA), which, among other things, provided guidelines for the classification and designation of mineral lands. Areas are classified on the basis of geologic factors without regard to existing land use and land ownership. The areas are categorized into four Mineral Resource Zones (MRZs):

- **MRZ-1:** An area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** An area where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- **MRZ-3:** An area containing mineral deposits, the significance of which cannot be evaluated.
- **MRZ-4:** An area where available information is inadequate for assignment to any other MRZ

Of the four categories, lands classified as MRZ-2 are of the greatest importance. Such areas are underlain by demonstrated mineral resources or are located where geologic data indicate that significant measured or indicated resources are present. MRZ-2 areas are designated by the Mining and Geology Board as being "regionally significant" (California Surface Mining and Reclamation Policies and Procedures 2000). Such designations require that a Lead Agency's land use decisions involving designated areas be made in accordance with its mineral resource management policies and that it consider the importance of the mineral resource to the region or the State as a whole, not just to the Lead Agency's jurisdiction.

No known mineral resources exist within the City of Garden Grove (City of Garden Grove General Plan Conservation Element, 2008). The proposed project would not result in the loss of a known commercially valuable or locally important mineral resource. No impacts to known mineral resources would occur as a result of the proposed project, and therefore, no mitigation would be required.

b. Would the project 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. As stated in Response 4.12 (a), there are no known mineral resources within the City of Garden Grove. The project site is currently developed with four structures including three single-family residential units and one accessory building. No mineral extraction activities occur on the project site, and it is not located within an area known to contain locally important mineral resources. Therefore, the project would not result in the loss of availability of a locally important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan as a result of project implementation. No mitigation would be required.

4.13 NOISE

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

The impact analysis below is based on the results of the *Noise and Vibration Impact Memorandum* (2022), prepared by LSA Associates, Inc. for the proposed project, and included as Appendix E.

4.13.1 Impact Analysis

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

Less Than Significant with Mitigation Incorporated. The proposed project would result in short-term construction noise impacts on adjacent land uses and long-term noise impacts related to mobile sources.

Short-Term Construction Noise Impacts

Construction noise impacts would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of impacts generally would be from 1 day to several weeks depending on the phase of construction. Two types of short-term noise impacts would occur during project construction: (1) equipment delivery and construction worker commutes, and (2) project construction operations. The first type of short-term construction noise would result from transport of construction equipment and materials to the project site and construction worker commutes. These transportation activities would incrementally raise noise levels on access roads leading to the site. It is expected that larger trucks used in equipment delivery would generate higher noise impacts than trucks associated with worker commutes. The single-event noise from equipment trucks passing at a distance of 50 ft from a sensitive noise receptor would reach a maximum level of 84 A-weighted decibel maximum instantaneous sound level (dBA L_{max}). However, the pieces of heavy equipment for grading and construction activities would be moved on site one time and would remain on site for the duration of all construction phases. This one-time trip, when heavy construction equipment is moved on and off site, would not add to the daily traffic noise in the project vicinity. The total number of daily vehicle

trips would be minimal when compared to existing traffic volumes on the affected streets, and the long-term noise level changes associated with these trips would not be perceptible. Therefore, equipment transport noise and construction-related worker commute impacts would be short-term and would not result in a significant off-site noise impact.

The second type of short-term noise impact is related to noise generated during demolition, site preparation, grading, building construction, paving, and architectural coating on the project site. Construction is undertaken in discrete steps, each of which has its own mix of equipment and its own noise characteristics. These various sequential phases would change the character of the noise generated on the project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 4.13.A lists the maximum noise levels for typical construction equipment based on a distance of 50 ft between the construction equipment and a noise receptor. Typical operating cycles for these types of construction equipment may involve 1–2 minutes of full power operation followed by 3–4 minutes at lower power settings.

In addition to the reference maximum noise level, the usage factor provided in Table 4.13.B is used to calculate the hourly noise level impact for each piece of equipment. Each piece of construction equipment is operated as an individual point source. Table 4.13.A shows the composite noise levels of the pieces of equipment for each construction phase at a distance of 50 ft from the construction area.

As presented above, Table 4.13.B shows the construction phases, the expected duration of each phase, the equipment expected to be used during each phase, the composite noise levels of the equipment at 50 ft, the distance of the nearest residential building from the average location of construction activities (a distance of 110 ft from the center of the project site), and noise levels expected during each phase of construction. These noise level projections do not take into account intervening topography or barriers. It is expected that average noise levels during construction at the nearest residences to the west would approach 80 dBA L_{eq} during the demolition phase, which would take place for a duration of approximately 6 weeks. Average noise levels during other construction phases would range from 74 dBA L_{eq} to 79 dBA L_{eq}. The elevated noise levels would cease once project construction is completed. The proposed project would be required to comply with the construction hours specified in the City's Noise Ordinance which states that construction activities on sites within 500 ft of a residentially zoned property are allowed between 7:00 a.m. and 10:00 p.m. Emergency work is excluded from these restrictions. Additionally, Policy N – 1.1 of the City's General Plan Noise Element requires the proposed project to develop techniques to minimize the noise impacts on residences from construction activities in or near residential neighborhoods. With adherence to the City's Noise Ordinance, as summarized in Regulatory Compliance Measure RC-NOI-1, below, and the City's General Plan Policy N – 1.1, as summarized in RC-NOI-2, noise levels during construction would be reduced to the greatest extent feasible. While construction operations have the potential to generate audible noise at surrounding uses, construction noise levels generated during the permitted hours are exempt from compliance with City noise standards, would be temporary and mobile, and would be less than significant. No mitigation is required.

Table 4.13.A: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)[1]	Maximum Noise Level (L_{max}) at 50 Ft[2]
Auger Drill Rig	20	84
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Paver	50	77
Pickup Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Trencher	50	80
Welder	40	73

Source: FHWA Roadway Construction Noise Model User's Guide, Table 1 (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
FHWA = Federal Highway Administration
ft = foot/feet
L_{max} = maximum instantaneous sound level

Table 4.13.B: Construction Noise Levels by Phase

Phase	Duration (days)	Equipment	Composite Noise Level at 50 ft (dBA L_{eq})	Distance to Sensitive Receptor (ft)[1]	Noise Level at Receptor (dBA L_{eq})
Demolition	30	2 dumpers/tenders, 2 excavators, 1 dozer, 3 tractors/loaders/backhoes	87	110	80
Site Preparation	90	1 dumper/tender,1 excavator, 1 grader, 1 dozer, 1 tractor/loader/ backhoe	86	110	79
Grading	30	1 grader, 1 dozer, 2 tractors/loaders/backhoes	86	110	79
Building Construction	180	1 air compressor, 1 crane, 1 forklift, 1 generator, 1 tractor/ loader/backhoe, 3 welders	84	110	77
Paving	90	1 cement and mortar mixer, 1 paver, 1 paving equipment, 1 roller, 1 tractor/loader/backhoe	85	110	78
Architectural Coating	30	1 air compressor	74	110	74

Source: Compiled by LSA (2022).
[1] Distances are from the average location of construction activity for each phase, center of project site. Residential zoned properties would be within 300 ft of the edge of construction activity
dBA L_{eq} = average A-weighted hourly noise level
ft = foot/feet

Long-Term Off-Site Traffic and Operational Noise and Ground-Borne Noise from Vehicular Traffic Impacts

The proposed project is estimated to generate an average daily traffic (ADT) volume of 95 based on 13 single-family residential units. The existing ADT volume on Lampson Avenue is 13,853 (City of Garden Grove, Circulation Element 2008). While the existing volume is likely higher today, the project-related traffic would increase traffic noise along Lampson Avenue by up to 0.1 dBA. This noise level increase would not be perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from project-related traffic on off-site sensitive receptors would be less than significant, and no mitigation is required.

Potential long-term noise impacts would be associated with stationary sources proposed on the project site. Stationary noise sources from the proposed project would include noise generated from on-site heating, ventilation, and air conditioning (HVAC) noise. Based on previous measurements that LSA has conducted, the HVAC equipment would generate noise levels of 66.6 dBA L_{eq} at 5 ft per HVAC unit. The closest off-site residential use during operation of the proposed project would be the existing single-family residences surrounding the project site. Because the exact location of HVAC equipment and the specifications are unknown at this time, operations could potentially result in a significant impact. Table 4.13.C provides a summary of HVAC noise levels for the proposed project that potentially may reach properties adjacent to the project site.

Table 4.13.C: Summary of HVAC Noise Levels

Off-Site Land Use	Direction	Description	Distance from HVAC Units (ft)	Reference Noise Level (dBA L_{eq}) at 5 ft	Distance Attenuation (dBA)	Average Noise Level (dBA L_{eq})
Residential	East	Single-Family House	35	66.6	16.9	49.7

Source: Compiled by LSA (2021).
dBA = A-weighted decibels
ft = foot/feet
HVAC = heating, ventilation, and air conditioning
L_{eq} = equivalent continuous sound level

By providing quieter HVAC equipment or by keeping HVAC equipment 35 ft or more from the adjacent property lines the City's exterior noise level standard would be met as described in Mitigation Measure MM-NOI-1. With implementation of MM NOI-1 that requires distance attenuation, noise generated from on-site HVAC equipment 35 ft from the project property line would potentially reach up to 49.7 dBA L_{eq} at the nearest residences, which would not exceed the City's exterior daytime (7:00 a.m. to 9:00 p.m.) and nighttime (9:00 p.m. to 7:00 a.m.) noise standards of 55 dBA L_{eq} and 50 dBA L_{eq}, respectively, for residential uses. Therefore, noise associated with the on-site HVAC equipment would be less than significant with incorporation of Mitigation Measure NOI-1.

On-Site Traffic Noise Impacts

Existing traffic noise levels at the project site are expected to reach 61 dBA community noise equivalent level (CNEL) at the building setbacks. To estimate noise levels along Lampson Avenue between Magnolia Street and Gilbert Street for future traffic conditions, the project trips are added to existing volumes. The existing ADT volume for the adjacent segment of Lampson Avenue is 13,853. Future capacity ADT volume for the segment of Lampson Avenue between Magnolia Street and Gilbert Street, based on the City's General Plan Circulation Element, is estimated to be 25,000. Taking into account the future volume adjustment of 2.6 dBA CNEL, future noise levels are expected to approach 63.6 dBA CNEL at the private exterior living area of the single-family homes closest to Lampson Avenue. Therefore, noise levels at outdoor noise-sensitive uses would be less than significant since the levels would not exceed the City's exterior allowable noise exposure level of 65 dBA CNEL. No mitigation is required.

In addition to the exterior noise level standards, the project must demonstrate compliance with the interior noise standard of 45 dBA CNEL. Based on the Environmental Protection Agency's *Protective Noise Levels*, with windows and doors open, interior noise levels would be 52.0 dBA (i.e., 64.0 dBA–12 dBA = 52.0 dBA), which would exceed the 45 dBA CNEL interior noise standard. The proposed project includes an HVAC system that would allow windows to remain closed. With the incorporation of standard building construction which assumes a wall rating of Sound Transmission Class (STC) 46 along with a window rating of STC-25 with a windows closed condition, interior noise levels would be 39 dBA (i.e., 64 dBA–25 dBA = 39 dBA), which is below the 45 dBA CNEL interior noise standard with windows closed for noise-sensitive land uses. Therefore, with standard building construction and the proposed HVAC system, the interior noise levels would be less than significant, and no mitigation is required.

4.13.2 Regulatory Compliance and Mitigation Measures

The following Regulatory Compliance Measures are required to reduce construction noise and vibration impacts to the extent feasible:

RC-NOI-1 The proposed project shall be required to comply with the construction hours specified in the City of Garden Grove's (City) Noise Ordinance, which states that construction activities on sites within 500 feet (ft) of a residentially zoned property are allowed between the hours of 7:00 a.m. and 10:00 p.m.

RC-NOI-2 As required by the policies of the City's General Plan Noise Element, the proposed project must implement techniques to minimize the noise impacts on residences from construction activities that take place in or near residential neighborhoods. The following are measures that shall be implemented:

- Noise and ground-borne vibration construction activities whose specific location on the project site may be flexible (e.g., operation of compressors and generators, cement mixing, and general truck idling) shall be conducted as far as possible from the nearest off-site land uses.
- When possible, construction activities shall be scheduled to avoid operating several pieces of equipment simultaneously, which causes high noise levels.
- The project contractor shall use power construction equipment with state-of-the-art noise shielding and muffling devices.
- Barriers such as flexible sound control curtains shall be erected around heavy equipment to minimize the amount of noise on the surrounding land uses to the maximum extent feasible during construction.
- All construction truck traffic shall be restricted to truck routes approved by the City, which shall avoid residential areas and other sensitive receptors to the extent feasible.
- A construction notice shall be prepared and shall include the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public and approved by the City.

The following Mitigation Measure (MM) is required to reduce operational noise impacts to a less than significant level.

MM-NOI-1 **HVAC Equipment.** Prior to issuance of building permits, the City's Community Development Director, or designee, shall verify that building plans indicate that mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC]) shall have a sound rating of less than 66.6 A-weighted decibels (dBA) when measured at more than 35 feet from the project property line to assure compliance with the City's Noise Ordinance. Should HVAC equipment be louder or closer than those details provided above, the applicant would be required to retain an acoustical engineer to model noise levels and confirm that noise levels would comply with City exterior noise standards, prior to issuance of a certificate of occupancy. In this circumstance, a follow-up noise memorandum shall be prepared by the acoustical engineer and submitted to the City's Community Development Director, or designee, for approval.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant with Mitigation Incorporated. Project construction would result in short-term vibration impacts on adjacent land uses as detailed in the analysis below. Construction impacts would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction. The duration of impacts generally would be from 1 day to several weeks depending on the phase of construction.

Ground-borne noise and vibration from construction activity would be mostly low. Table 4.13.D provides reference peak particle velocity (PPV) values and vibration levels (in terms of vibration velocity in decibels [VdB]) from typical construction vibration sources at 25 ft. Although the specific pieces of equipment that would be used on the site are unknown at this time, to provide an analysis of potential vibration levels expected for a project of this size, a large bulldozer would generate 0.089 PPV (in/sec) of ground-borne vibration when measured at 25 ft, based on the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual). It would take a minimum of 0.20 PPV (in/sec) to cause any potential building damage to non-engineered timber and masonry buildings.

Table 4.13.D: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 ft	
	PPV (in/sec)	L_V (VdB)[1]
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS VdB re 1 µin/sec.
µin/sec = micro-inches per second
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity in decibels

The closest structure to the project site is the residence to the north of the site, approximately 5 ft from the limits of construction activity. Using the reference data from Table 4.13.E, it is expected that vibration levels generated by dump trucks and other large equipment that would be as close as 10 ft from the property line would generate ground-borne vibration levels of up to 0.192 PPV (in/sec) at the closest structure to the project site. This vibration level would not exceed the 0.2 PPV (in/sec) threshold considered safe for non-engineered timber and masonry buildings. It is expected that construction activities utilizing heavy equipment would generate vibration levels greater than 0.2 in/sec in PPV when operating within 10 ft of the property line, which would result in a potentially significant impact. Vibration levels at all other buildings would be lower. In order to mitigate impacts, Mitigation Measure MM-NOI-2 is required to ensure that damage to surrounding structures does not occur. Therefore, construction would not result in any vibration damage, and impacts would be less than significant with the incorporation of MM-NOI-2.

Additionally, analysis was conducted to determine whether the construction vibration could cause annoyance to humans. The existing residence, located approximately 110 ft to the west from the center of the project site, is the nearest sensitive receptor and would experience vibration levels approaching 68 VdB. This level of ground-borne vibration is below the threshold of distinctly perceptible, which is approximately 72 VdB for frequent events at locations where people sleep and would not exceed the FTA vibration threshold for human annoyance at the nearest sensitive use. Project construction would not result in vibration levels that would typically result in human annoyance.

Lastly, long-term ground-borne vibration from vehicular traffic was analyzed for the proposed project. Because the rubber tires and suspension systems of buses and other on-road vehicles provide vibration isolation and reduce noise, it is unusual for on-road vehicles to cause ground-borne noise or vibration. When on-road vehicles cause such effects as the rattling of windows, the source is almost always airborne noise. Most problems with on-road vehicle-related noise and vibration can be directly related to a pothole, bump, expansion joint, or other discontinuity in the road surface. Smoothing the bump or filling the pothole will usually solve the problem. The proposed project would be accessed from roads with smooth pavement and would not result in significant ground-borne noise or vibration impacts from vehicular traffic. Overall, potential impacts related to the generation of excessive ground-borne vibration or ground-borne noise levels would be reduced to less than significant with the incorporation of MM-NOI-2.

4.13.3 Mitigation Measures

The following mitigation measure is required to reduce noise and vibration impacts to a less than significant level:

MM-NOI-2 **Construction Vibration Damage.** Due to the close proximity to surrounding structures, the City's Community Development Director, or designee, shall verify prior to issuance of demolition and grading permits, that demolition and grading plans shall require the construction contractor to implement the following mitigation measures

during project construction activities to ensure that damage does not occur at surrounding structures:

- Identify structures that are located within 5 feet (ft) of heavy construction activities and that have the potential to be affected by ground-borne vibration. This task shall be conducted by a qualified structural engineer as approved by the City's Community Development Director, or designee.

- Develop a vibration monitoring and construction contingency plan for approval by the City's Community Development Director, or designee, to identify structures where monitoring would be conducted; set up a vibration monitoring schedule; define structure-specific vibration limits to avoid damage; and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies would be identified for when vibration levels approached the limits. The contingencies may include, but are not limited to use of smaller equipment, increased distance requirements, and alternative construction methods.

- At a minimum, monitor vibration during initial demolition activities. Monitoring results may indicate the need for more or less intensive measurements.

- When vibration levels approach limits, suspend construction and implement contingencies as identified in the approved vibration monitoring and construction contingency plan to either lower vibration levels or secure the affected structures.

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

No Impact. The project site is approximately 6.25 miles south of Fullerton Municipal Airport and approximately 3.85 miles west of Joint Forces Training Base in Los Alamitos. Based on a review of the Airport Influence Area Map for the Fullerton Municipal Airport (Los Angeles County Airport Land Use Commission 2003), noise impacts related to aircraft operations may contribute to the aircraft noise in the project area; however, the project site is well outside of the 60 dBA CNEL contours. Additionally, the project site is not in a flight pattern area (i.e., takeoff or landing) for either airport. Therefore, the proposed project would not expose people residing or working in the proposed project vicinity to excessive noise levels from aircraft noise. No noise impacts would occur, and no mitigation is required.

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4.14 POPULATION AND HOUSING

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

4.14.1 Impact Analysis

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. The project site is currently developed and located within an urban area of the City of Garden Grove (City). Approval of the project involves a zone change to a Planned Unit Development (PUD), a variance to deviate from the minimum 3-acre requirement to allow a zone change to a PUD, approval of a Vesting Tentative Tract Map and Site Plan, and construction of 13 single-family units with private recreational areas, an open space parcel, and two private streets.

According to the United States Census Bureau 2020 Decennial Census data, the population in the City of Garden Grove is approximately 171,949. As articulated in Section 4.15, Public Services, below, the proposed project would result in an increase of approximately 47 residents.[4] This increase in population would incrementally increase the City's population by 0.03 percent to 171,996 residents. Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) forecasts that the population for the City of Garden Grove would increase from 176,000 in 2016 to approximately 185,800 people by the year 2045 (SCAG 2020). The projected increase of 47 residents from the proposed project represents approximately 0.5 percent of the forecasted projected growth for the City, and therefore, the proposed project would be consistent with the SCAG growth projections.[5] Additionally, the City's Regional Housing Needs Assessment (RHNA) for the 2021–2029 planning period identifies that the City's future housing need is 19,168 units for very-low income, low income, moderate income, and above moderate income

[4] Proposed project residents: 13 single-family residential units x 3.57 persons/household (according to United States Census Bureau 2020 Decennial Census Data) = 46.4 persons.
Net increase of residents: 47 additional persons – (3 existing single-family residential units x 3.57 persons/household) = 36 persons.

[5] SCAG's forecasted growth from 2016 to 2045 in the City is 176,000 to 185,800 (addition of 9,800 residents). (47 new residents from proposed project)/(population growth of 9,800) = 0.5 percent.

households (City of Garden Grove 2021). The project would contribute toward the City's future housing need for the 2021–2029 planning period.

The proposed project's forecasted population growth accounts for less than one percent of the City's overall population and is within the City's population forecast, and it would also contribute to the City's future housing needs. Therefore, the project would not induce substantial unplanned population growth, and the effects would be less than significant. No mitigation is required.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Less Than Significant Impact. In its existing condition, the project site is developed with three single-family residential homes and a small accessory building currently used as an office. Project construction would include the removal of those three single-family units in order to construct 13 single-family homes on the project site. Although there would be permanent displacement of the residents currently living at the project site, the proposed project includes the construction of replacement housing that would accommodate ten more units than the current conditions on the project site. The project would not result in the displacement of substantial numbers of existing people or housing that would necessitate the construction of replacement housing elsewhere. Impacts would be less than significant, and no mitigation is required.

4.15 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant 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, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☒	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☒	☐
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☒	☐

4.15.1 Impact Analysis

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire protection?

Less Than Significant Impact. Fire prevention, fire protection, and emergency medical services in the Project area are provided by the Orange County Fire Authority (OCFA). OCFA is a regional service agency that provides fire suppression, emergency medical services, hazardous materials response, wildland firefighting, technical rescue, and airport rescue firefighting services, and a variety of other public services to its service area of approximately two million residents that includes 24 cities in Orange County and all unincorporated areas in the County. Currently, OCFA has a total of 77 stations located throughout Orange County (OCFA Fiscal Year 2020–2021 Adopted Budget, 2021). OCFA Fire Station No. 82 is located approximately 0.7-mile northeast of the project site at 11805 Gilbert Street and is the station that would be the first to serve the project area in the event of an emergency.

In Fiscal Year 2020–2021, OCFA responded to emergency calls within 9 minutes and 15 seconds 90 percent of the time across all service areas (OCFA Fiscal Year 2020–2021 Adopted Budget, 2021). Although the ratio of firefighters per 10,000 residents increased slightly in the last two fiscal years from 5.39 to 5.86 firefighters for every 10,000 residents, during the past 10-year time frame, emergency call load has increased by 83 percent, due in part to the City of Santa Ana joining the OCFA in April of 2012 and the City of Garden Grove joining in August 2019 (OCFA Fiscal Year 2020–2021 Adopted Budget, 2021).

The proposed project would adhere to the public safety-related development standards described in Chapter 9.32.180 of the City's Municipal Code which addresses public nuisances and Chapter 9.32.030 of the City's Municipal Code, which addresses land use actions that are approved by the Planning Commission, Zoning Administrator, and City Council. The proposed project would also be designed to comply with all OCFA requirements, including providing adequate fire flow/structure protection to the proposed project area and providing adequate access for emergency vehicles. The project would be required to obtain City Fire Department approval of building plans prior to issuance of building permits. Although the proposed project would result in approximately 47 additional residents and a net increase of 36 residents[6], it is not anticipated that the development would substantially increase the need for fire protection services, or adversely affect the City's Fire Department's ability to provide service to the site via existing equipment and personnel because of the small number of additional residents. Therefore, a less than significant impact would occur, and no mitigation is required.

ii. Police protection?

Less Than Significant Impact. The Garden Grove Police Department (GGPD) provides police services within the City of Garden Grove. The proposed project would result in the development of 13 residential lots with private recreational areas, an open space parcel, and two private streets. The GGPD station and headquarters are located at 11301 Acacia Parkway, approximately 2.2 miles southeast of the project site. As described above, the proposed project would result in an increase of approximately 47 residents. However, this slight increase in the City's population would not substantially increase the demand for police protection services or facilities. No long-term road closures or closures during peak travel hours are anticipated through the proposed project area during construction of the proposed development project. Additionally, the proposed project would adhere to all applicable policies and codes related to the provision of police services. Therefore, impacts on police services would be less than significant, and no mitigation is required.

iii. Schools?

Less Than Significant Impact. The Garden Grove Unified School District (GGUSD) consists of 71 schools including preschool and elementary schools, intermediate schools, high schools, and alternative schools, and provides education services to nearly 40,500 students in the cities of Garden Grove, Anaheim, Cypress, Fountain Valley, Santa Ana, Stanton, and Westminster. GGUSD schools within the vicinity of the project site include Louis G. Zeyen Elementary School located at 12081 Magnolia Street, Brookhurst Elementary School located at 9821 William Dalton Way, Stanford Elementary School located at 12721 Magnolia Street, and Hare High School located at 12012 Magnolia Street. The closest GGUSD schools to the project site are Stanford Elementary School and Louis G. Zeyen Elementary School, which are located approximately 0.2 mile southwest and 0.5 mile northwest of the project site, respectively. As described above, the proposed project would result in an increase of about 47 residents, and pursuant to California Government Code Section 17620, the governing board of GGUSD is authorized to levy a fee, charge, dedication, or other requirement against the proposed

[6] Proposed project residents: 13 single-family residential units x 3.57 persons/household (according to United States Census Bureau 2020 Decennial Census Data) = 46.4 persons.
Net increase of residents: 47 additional persons – (3 existing single-family residential units x 3.57 persons/household) = 36 persons.

project which lies within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities to accommodate future student enrollment. Additionally, the proposed project would be required to pay mitigation school fees which are applied to new development projects in the City by GGUSD (City of Garden Grove 2021c). Therefore, impacts related to student generation and the potential need for additional school facilities would be less than significant, and no mitigation is required. Therefore, the proposed project would have a less than significant impact related to demand for school facilities. No mitigation is required.

iv. Parks?

Less Than Significant Impact. According to the City's General Plan Parks, Recreation, and Open Space Element (2008), the City maintains approximately 157.1 acres of parkland. The Parks, Recreation, and Open Space Element established a standard of 2.0 acres of parkland per 1,000 residents. According to the United States Census Bureau 2020 Decennial Census data, the population in the City of Garden Grove is approximately 171,949. Based on this population, this target is not currently met, with approximately 0.9 acre of parkland available per 1,000 residents.[7] As described above, the proposed project would result in an increase of approximately 47 residents, which would not lead to a substantial increase in the population or visitors to the project area. The proposed project would also include on-site grass areas and recreational facilities for residents. Therefore, the proposed project would have a less than significant impact related to the demand for parks. No mitigation is required.

v. Other public facilities?

Less Than Significant Impact. Other public facilities, not previously mentioned above, may include, but are not limited to, libraries, recreational facilities that are not parks (parks are addressed above in 15(a)(iv)), and public works/maintenance services (trash, street sweeping, sewers, storm drains, transit, etc.). There is one library within 1 mile of the project site. The Orange County Public Library – Chapman Branch is located approximately 0.5 mile northeast of the project site at 9182 Chapman Avenue. As described above, the proposed project would result in an increase of approximately 47 residents. However, this slight increase in the City's population would not substantially increase the demand for public facilities in the proposed project area. Additionally, according to Section 9.44.010 of the City's Municipal Code, payment of in-lieu fees and development impact fees would be required to offset impacts to City infrastructure created by the proposed project. These fees include traffic impact mitigation fees (pursuant to Chapter 10.110 of the Municipal Code), a water assessment fee (pursuant to Chapter 14.24 of the Municipal Code), a drainage facilities fee and park fees for subdivisions (which is noted in Section 15 (a)(iv)) (pursuant to chapter 9.44), and a parkway tree fee (pursuant to Chapter 9.40 of the Municipal Code). Payment of applicable development fees would ensure that impacts to other public facilities would remain less than significant. No mitigation is required.

[7] 157.1 acres / (171,949/1,000 residents) = 0.9 acre / 1,000 residents

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4.16 RECREATION

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

4.16.1 Impact Analysis

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

Less Than Significant Impact. The proposed project The City of Garden Grove (City) Municipal Code Section 9.44.030 and General Plan Parks, Recreation, and Open Space Element states a goal of providing 2 acres of parks per 1,000 residents. The proposed project includes the construction of 13 single-family homes, which may lead to an increase of approximately 47 persons.[8] According to the United States Census Bureau Decennial Census data, the population in the City of Garden Grove is approximately 171,949. Therefore, the City aims to provide approximately 344 acres of parks for the entirety of the City.[9] With the additional 47 people that the proposed project may introduce, the city would still aim to provide approximately 344 acres of parks.

The addition of 47 persons would also amount to an approximately 0.03 percent increase in the total population, of the City of Garden Grove, which is a relatively small amount that would not substantially alter the use of existing recreational facilities. Additionally, although the project provides approximately 2,864 sf of open space uses, it would still comply with City codes requiring payment of impact fees for parks. Therefore, the residential development project would not affect the number of acres of parkland that the city aims to provide in its General Plan. Impacts related to this topic would be less than significant and no mitigation is required.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact. According to the Garden Grove General Plan Parks, Recreation, and Open Space Element, there are currently approximately 157 acres of parks in the City. The closest City park facility is Hare School Park located at 12012 Magnolia Street, approximately 0.3 mile north of the project site. As specified in the Garden Grove Section 9.44, Mitigation Fees, the City collects park dedication and in-lieu fees for every residential subdivision. These park fees are to be used for

[8] 13 single-family residential units x 3.57 persons/household = 46.4 persons
[9] 171,949 persons x (2 acres/1,000 persons) = 344 acres

providing park and recreational facilities to serve future residents of the subdivision. The proposed project would be required to comply with Garden Grove Municipal Code Chapter 9.44. In addition to the payment of park dedication and in-lieu fees, the proposed project would include a 2,864 sf open space lot with grass (Lot "B") in the northeastern corner of the project on the corner of Street "A" and Street "B," as well as two open space lots bordering Lampson Avenue on the southern boundary of the project site. These lots will be landscaped and maintained by the homeowner's association. There will also be a total of 6,700 sf of landscaped area in the front yards of the residential units which would be maintained by the individual homeowners. Each residential unit will have backyard areas ranging in size from approximately 645 to 1,092 sf in addition to the front yard landscaped areas that they are responsible for maintaining. Additionally, the project does not propose, and would not create a need for, new or physically altered recreational facilities. Therefore, impacts would be less than significant, and no mitigation is required.

4.17 TRANSPORTATION

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

4.17.1 Impact Analysis

a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact. The proposed project would be required to comply with the Circulation Element policies of the City of Garden Grove's (City) General Plan (2008), as well as regulations outlined in the Municipal Code. The Circulation Element identifies and establishes the City's policies governing the system of roadways, intersections, bicycle paths, pedestrian ways, and other components of the circulation system, which collectively provide for the movement of people and goods throughout the City. The Circulation Element establishes official City policy that:

- Identifies the transportation facilities that will be required to serve both present and future vehicular and non-vehicular travel demand in the City;
- Identifies classifications and design standards for circulation facilities; and
- Identifies strategies to implement the City's circulation system.

Due to State legislation and the Orange County Congestion Management Program (CMP) requirements, a CMP highway network has been adopted in the City. The CMP arterials in the City of Garden Grove are the SR-22 Freeway, Valley View Street, Katella Avenue, Harbor Boulevard, and Westminster Avenue.

Most of the City's Circulation Element goals and policies pertain to implementation programs that would be carried out by the City. However, some of the Circulation Element goals are applicable to the project. These consist of goals related to reduced vehicle trips (Goal CIR-4), alternative forms of transportation (Goal CIR-5), access and traffic flow in parking areas (Goal CIR-7), attractive streetscapes (Goal CIR-9), and traffic operations (Goal CIR-1). Project implementation would not conflict with these goals because, as discussed in Section 4.17 (b) below, the relatively small size of the project would not result in significant effects related to vehicle miles traveled (VMT). The project

would not impede the City's goal to provide increased awareness and use of alternate forms of transportation generated in, and traveling through, the City. The future residents of the project would have adequate access to appropriate parking in accordance with residential parking standards required by the City's Municipal Code. Project landscaping would provide street trees and landscaped areas along street frontages internal to the project and along Lampson Avenue. With respect to traffic operations, due to the relatively small size of the 13-unit residential subdivision, it would not inhibit the City's goal of providing a transportation system that maximizes freedom of movement and maintains a balance between mobility, safety, cost efficiency of maintenance, and the quality of the City's environment. As described below, the proposed project would not generate a substantial number of daily or peak-hour vehicle trips to warrant modifications to any other transportation facilities. The overall project design would provide and/or maintain required access for transit, roadway, bicycle, and pedestrian facilities and such facilities would be designed in a manner that is consistent with the City's transportation policies and street design standards.

With Senate Bill (SB) 743 becoming effective statewide in July 2020, automobile delay (level of service) is no longer considered to be a significant environmental effect under the California Environmental Quality Act (CEQA). Pursuant to SB 743, CEQA requires the evaluation of VMT when analyzing a project's environmental effects on transportation.

In order to assess the projected distribution of project traffic volumes on the surrounding circulation system, LSA calculated the project trips that would be generated for temporary construction activities based on the estimated number of construction trucks and workers, as well as the project trips once operational.

Based on the Project Description and construction information provided by the Applicant (email correspondence dated May 2022), construction of the project would include the following six phases (with phase durations and daily worker and truck estimates) over approximately 16.5 months, assuming some overlap between the phases:

1. Demolition (6 weeks): 12 workers and 2 haul trucks per day
2. Site Preparation (17 weeks): 8 workers per day
3. Grading (6 weeks): 8 workers and 9 haul trucks per day
4. Building Construction (36 weeks): 30 workers and 4 vendor trucks per day
5. Architectural Coating (18 weeks): 24 workers per day
6. Paving (6 weeks): 24 workers per day

A passenger car equivalent (PCE) factor of 2.0 has been applied to the trucks. Truck trips would occur throughout the day, including both peak hours. It is assumed that workers would arrive at the site prior to the a.m. peak hour and depart the site during the p.m. peak hour.

Tables 4.17.A and 4.17.B below present the construction and operational trip generation for the project.

Table 4.17.A: Construction Trip Generation

Construction Phase			Daily Vehicles				Vehicle Trip Generation							PCE Trip Generation						
								AM Peak Hour			PM Peak Hour				AM Peak Hour			PM Peak Hour		
Description		Duration[1]	Description	No.	Type	PCE	ADT	In	Out	Total	In	Out	Total	ADT	In	Out	Total	In	Out	Total
			Workers [2]	12	Passenger	1	24	0	0	0	0	12	12	24	0	0	0	0	12	12
			Haul Trucks [2]	2	Truck	2	4	0	0	0	0	0	0	8	0	0	0	0	0	0
1.	Demolition	6 weeks	Total				28	0	0	0	0	12	12	32	0	0	0	0	12	12
2.	Site Preparation	17 weeks	Workers [2]	8	Passenger	1	16	0	0	0	0	8	8	16	0	0	0	0	8	8
			Workers [2]	8	Passenger	1	16	0	0	0	0	8	8	16	0	0	0	0	8	8
			Haul Trucks [2]	9	Truck	2	18	1	1	2	1	1	2	36	2	2	4	2	2	4
3.	Grading	6 weeks	Total				34	1	1	2	1	9	10	52	2	2	4	2	10	12
			Workers [2]	30	Passenger	1	60	0	0	0	0	30	30	60	0	0	0	0	30	30
			Vendor Trucks [2]	4	Truck	2	8	0	0	0	0	0	0	16	0	0	0	0	0	0
4.	Building Construction	36 weeks	Total				68	0	0	0	0	30	30	76	0	0	0	0	30	30
5.	Architectural Coating	18 weeks	Workers [2]	24	Passenger	1	48	0	0	0	0	24	24	48	0	0	0	0	24	24
6.	Paving	6 weeks	Workers [2]	24	Passenger	1	48	0	0	0	0	24	24	48	0	0	0	0	24	24
			Workers [2]	54	Passenger	1	108	0	0	0	0	54	54	108	0	0	0	0	54	54
Overlapping			Vendor Trucks [2]	4	Truck	2	8	0	0	0	0	0	0	16	0	0	0	0	0	0
Phases 4 and 5		18 weeks	Total				116	0	0	0	0	54	54	124	0	0	0	0	54	54

Source: PLC Communities (2022).

[1] Construction is anticipated to occur from June 2023 to October 2024.

[2] Workers are assumed to arrive prior to the a.m. peak hour and depart during the p.m. peak hour. Truck trips are assumed to occur throughout the day.

ADT = average daily trips

PCE = passenger car equivalent. A worker vehicle has a PCE of 1 and a truck has a PCE of 2.

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Table 4.17.B: Project Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Single-Family Detached		du	9.43	0.18	0.52	0.70	0.59	0.35	0.94
Project Trip Generation									
Single-Family Detached	13	du	123	2	7	9	8	5	13
Existing Trip Generation									
Single-Family Detached	3	du	28	0	2	2	2	1	3
Net Trip Generation (Project - Existing)									
Single-Family Detached	10	du	95	2	5	7	6	4	10

Source: PLC Communities (2022).

[1] Trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition (2021). Land Use Code 210 - Single-Family Detached Housing

ADT = average daily trip

DU = dwelling unit

As shown in Table 4.17.A, overlapping Phases 4 and 5 (Building Construction and Architectural Coating) is the most intense period of construction (i.e., the period with the highest construction trip generation). Phases 4 and 5 are anticipated to overlap with a duration of 18 weeks and generate 124 average daily trips (ADT), including zero trips in the a.m. peak hour and 54 outbound trips in the p.m. peak hour, in PCEs. All other phases of construction would generate 76 or fewer ADT, including 30 or fewer peak-hour trips, in PCEs.

As shown in Table 4.17.B, based on trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition (ITE 2021), for Land Use 210 (Single-Family Detached Housing), typical operations of the project (e.g., net increase of 10 homes) are expected to generate a maximum of 95 ADT, including 7 trips (2 inbound and 5 outbound) in the a.m. peak hour and 10 trips (6 inbound and 4 outbound) in the p.m. peak hour.

Based on the low daily and peak-hour trip generation for temporary construction activities and typical operations, the project is not anticipated to result in any operational deficiencies to the surrounding circulation system, including CMP street arterials.

The Project would not generate a substantial number of daily or peak-hour vehicle trips for construction or typical operations to warrant modifications to any transportation facilities (e.g., vehicular, transit, bicycle, or pedestrian). In addition, the project would not result in a significant conflict with goals and policies of the City's Circulation Element nor would the project impede the City's ability to carry out related transportation implementation programs. Furthermore, the project would not create operational deficiencies to street arterials that are part of the City's CMP. Therefore, the proposed project would not result in a significant conflict with the City's plans or policies addressing the circulation system, and no mitigation is required.

b. Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?

Less Than Significant Impact. *State CEQA Guidelines* Section 15064.3, Subdivision (b), states that for land use projects, transportation impacts are to be measured by evaluating the project's vehicle miles traveled (VMT), as outlined in the following:

> *Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.*

VMT is the amount and distance of automobile travel attributable to a project. According to the 2018 Office of Planning and Research's (OPR) Technical Advisory, "automobile" refers to "on-road passenger vehicles, specifically cars and light trucks." Thus, project construction trucks are not included in the project VMT assessment.

The OPR Technical Advisory recommends VMT screening thresholds for smaller projects by stating the following:

> *Screening Thresholds for Small Projects*
>
> *Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.*

The OPR Technical Advisory recommends that a land use project generating 110 ADT or less be screened out of a VMT analysis due to the presumption of a less than significant impact. Similarly, the *City of Garden Grove Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* has VMT analysis screening criteria of 110 ADT for the presumption of a less than significant impact.

The project would generate temporary construction trips over 16.5 months. During overlapping Phases 4 and 5 (Building Construction and Architectural Coating) over 18 weeks, the project would generate a maximum of 124 ADT (16 truck and 108 worker ADT) in PCEs. However, as previously described, construction trucks do not need to be included in the VMT assessment. All other phases of construction would generate 60 or fewer ADT for workers. Once built and occupied, the project would generate 95 ADT.

The project is estimated to generate a maximum of 108 worker ADT for temporary construction (excluding truck ADT), and it would generate 95 ADT once built and occupied. As such, the project is considered a small project for the purposes of this analysis and would not conflict or be inconsistent

with *State CEQA Guidelines* Section 15064.3(b). Potential impacts would be less than significant, and no mitigation is required.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. Lampson Avenue would provide direct access to the project site. Street improvements are not required to accommodate construction or operational traffic along this roadway. The sidewalk along Lampson Avenue would be improved to City standards to provide safe pedestrian access. In addition, the internal private streets (Streets "A" and "B"') and sidewalks proposed by the project would be designed to meet City standards. Based on the temporary nature of the construction activities and trips, and the low trip generation for daily operations, project vehicles would not create operational deficiencies or related hazards to the public roadways (e.g., Lampson Avenue and Magnolia Street) when accessing the project site. In addition, adequate visibility (without any sight obstructions) would be provided along Lampson Avenue for all vehicles to safely access the project site, as parking would be prohibited along the project frontage of Lampson Avenue and internally along proposed Street "A" near its intersection with Lampson Avenue. Given the street characteristics of Lampson Avenue and the traffic volumes for the surrounding residential uses in the project vicinity, the proposed project would not substantially increase hazards for vehicles due to a geometric design feature or incompatible uses. Therefore, impacts related to this issue are less than significant, and no mitigation is required.

d. Would the project result in inadequate emergency access?

Less Than Significant Impact. The project would not require improvements to Lampson Avenue for temporary construction or typical operational traffic as described above. All emergency access routes to the project site and adjacent areas would be kept clear and unobstructed during all phases of construction and operations. No roadway closures or lane closures are anticipated as part of project construction, and traffic volumes resulting from construction vehicles would not impede traffic flow on the surrounding circulation system. Streets "A" and "B" would be constructed consistent with City design standards and Project plans would be reviewed by the City's Fire Department to ensure compliance with emergency standards. Therefore, the project would not result in inadequate emergency access, and no mitigation is required.

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4.18 TRIBAL CULTURAL RESOURCES

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

4.18.1 Impact Analysis

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

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

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public 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. A letter and location map describing the proposed project was sent to the Native American Heritage Commission (NAHC), requesting a list of tribes eligible to consult with the City, pursuant to Public Resources Code section 21080.3.1. On June 29, 2022, the NAHC responded in a letter with a list of tribal contacts. The City sent letters to these individuals via certified mail on August 3, 2022, notifying them of their opportunity to consult for this Project.

On August 10, 2022, the representative from the Gabrieleno Tribe – Kizh Nation responded with a list of construction monitoring measures that were requested to be included as part of project implementation. These mitigation measures are listed below. With implementation of mitigation measures MM-TCR-1 through MM-TCR-3, the proposed project would avoid any impacts on any unforeseen resources encountered during grading activities.

4.18.2 Mitigation Measures

The following mitigation measure is required to reduce tribal cultural resource impacts to a less than significant level:

MM-TCR-1 Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.

The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.

A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.

The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the Tribe.

On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

MM-TCR-2 Unanticipated Discovery of Human Remains and Associated Funerary Objects.

Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.

If Native American human remains and/or grave goods discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed.

Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).

Construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or burial goods, if the Kizh determines in its sole discretion that resuming construction activities at that distance is acceptable and provides the project manager express consent of that determination (along with any other mitigation measures the Kizh monitor and/or archaeologist deems necessary). (CEQA Guidelines Section 15064.5(f).)

Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

MM-TCR-3 Procedures for Burials and Funerary Remains.

As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains.

If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created.

The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials.

In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed.

In the event preservation in place is not possible despite good faith efforts by the project applicant/developer and/or landowner, before ground-disturbing activities may resume on the project site, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects.

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

The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery data recovery-

related forms of documentation shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.

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4.19 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater 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 which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

4.19.1 Impact Analysis

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

Less Than Significant Impact. The City of Garden Grove's main sources of water supply are groundwater from the Orange County Groundwater Basin (OC Basin) and imported potable water from the Metropolitan Water District of Southern California (MET) provided by the Municipal Water District of Orange County. In fiscal year 2019–2020, the City relied on approximately 50 percent groundwater and 50 percent imported water (City of Garden Grove 2020). It is projected that by 2045, the water supply mix will shift to 85 percent groundwater and 15 percent imported water. The imported water is treated at the Robert B. Diemer Filtration Plant located north of Yorba Linda.

Delivery of domestic water service in the City is provided by the Water Services Division of the City's Public Works Department. The Water Services Division is responsible for maintaining the wells, reservoirs, import water connections, and the distribution systems that deliver water throughout the City. To meet its infrastructure needs, the Water Services Division collaborates with other jurisdictions, agencies, and service providers, as required.

The proposed project would remain consistent with the City's General Plan and zoning requirements for residential uses. Projects that meet the requirements articulated in the General Plan and zoning

are considered planned for by the City's *2020 Urban Water Management Plan*, and therefore, capacity is assumed to be available. Additionally, the proposed project would implement a number of water conservation measures, including irrigation technologies such as smart irrigation technologies and high-efficiency irrigation methods, which would include sub-surface drip, stream bubblers with pressure-compensating screens that would be installed on separate valves, rotary nozzles, and smart irrigation controllers that shut off automatically when it rains. The proposed project would also be required to pay a water assessment fee (pursuant to Chapter 14.24 of the Municipal Code) for water facilities. Therefore, project impacts associated with an increase in potable water demand are considered less than significant, and no mitigation would be required.

Wastewater Treatment/Stormwater Drainage

Less Than Significant Impact. The Garden Grove Sanitary District is the primary agency responsible for the wastewater facilities in the City. The Garden Grove Sanitary District maintains wastewater treatment and collection operations via the City's Water Services Division of the Public Works Division. The Sanitation District maintains over 312 miles of sewer lines, 9,700 manholes, and four lift stations throughout the City. Once wastewater passes through the City's wastewater system, the Orange County Sanitation District (OCSD) is responsible for its treatment (City of Garden Grove 2022a).

OCSD is responsible for the collection, treatment, and disposal of domestic, commercial, and industrial wastewater generated by over 2.6 million people living and working in the central and northwestern County of Orange. OCSD facilities would receive wastewater generated from the proposed project. Wastewater from the proposed project would be treated at OCSD's Reclamation Plant No. 1 in Fountain Valley or at Treatment Plant No. 2 in Huntington Beach. Through these facilities, OCSD successfully collects, conveys, and treats wastewater generated daily in its service area before discharging the treated water into the Pacific Ocean. Average flows for Reclamation Plant No. 1 and Treatment Plant No. 2 are 119 million gallons per day (mgd) and 64 mgd, respectively. The combined average flow at both plants is 183 mgd (OCSD 2022).

As described in Chapter 2.0, Project Description, the proposed project intends to utilize the existing 18-inch sewer line located along the southern boundary of the project site and also extend two new 8-inch sewer lines within the project site. The proposed project would connect to the existing sanitary sewer line through the installation of a new 8-inch sewer line that would extend north along the proposed Street "A" to connect to another proposed 8-inch sewer line that would run along the proposed Street "B." The project site is currently developed with three single-family residential units and is adequately served by the existing wastewater conveyance system. The installation on the two new sanitary sewer lines along the proposed Street "A" and Street "B" would ensure that that there is sufficient capacity in the local lines to accommodate the project's wastewater flows. The proposed project would also pay any required sewer connection fees.

As articulated in Section 4.10, Hydrology and Water Quality, the proposed project construction would comply with the requirements of the Construction General Permit and would include the preparation and implementation of a SWPPP. The SWPPP would include construction BMPs to control and direct on-site surface runoff and would include detention facilities, if required to ensure that stormwater runoff from the construction site does not exceed the capacity of the stormwater drainage systems. Further, the project proposes the installation of a 6-inch curb and gutter along the proposed Street

"B" that would drain towards Street "A", which consists of rolled curbs and a 2-percent grade that would direct all runoff from the street to the two catch basins that are proposed along both sides of Street "A" where it approaches Lampson Avenue. There would also be two catch basins along the two proposed open space asphalted areas adjacent to the landscaped areas near Lampson Avenue. These proposed gutters and catch basins would connect to an existing 60-inch storm drain at the southern boundary of the project site along the north side of Lampson Avenue. Therefore, the proposed drainage facilities and best management practices (BMPs) needed to accommodate stormwater runoff would be appropriately implemented so that on-site flooding would not occur, and the facilities would be sufficient for the proposed project. In addition, as discussed in Section 4.10, the existing stormwater drainage facilities would provide sufficient capacity for surface runoff from the proposed project. Impacts would be less than significant because no expansion of existing facilities would be required, and no mitigation would be required.

Electric Power

Less Than Significant Impact. Electrical power would be supplied to the project site by Southern California Edison (SCE). SCE provides electricity to more than 15 million people in a 50,000-square mile area of central, coastal, and southern California. According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2020 was 83,533 gigawatt-hours (GWh) (CEC 2020a). Total electricity consumption in Orange County in 2020 was approximately 19,733 GWh (CEC 2020b).

Short-term construction activities would be limited to providing power to the staging area and portable construction equipment and would not substantially increase the demand for electricity. All power on the project site during construction would be provided through temporary SCE power poles. After construction is complete, the temporary power poles would no longer be used, and there would not be a need to alter existing electric transmission facilities. Impacts to local regional supplies of electricity would be less than significant during construction, and no mitigation is required.

The proposed project includes onsite connections to the existing electric facilities adjacent to the project site. Operation of the proposed project would increase onsite electricity demand. As identified in Section 4.6, Energy, the proposed project would comply with the 2019 California Green Building Standards Code (CALGreen Code) for energy conservation and green building standards. The proposed project would also be constructed to meet Title 24 standards, which would help to reduce energy and natural gas consumption. The project would be required to adhere to all federal, State, and local requirements for energy efficiency, which would substantially reduce energy usage. In addition, the proposed project would be designed to include a 3-megawatt solar system. Overall, the proposed project would be subject to renewable energy or energy efficiency measures for building design, equipment use, and transportation. Based on the California Emissions Estimator Model (CalEEMod) outputs for the proposed project, the estimated potential increase in electricity demand associated with the operation of the proposed project is 101,635 kilowatt-hours (kWh) per year. Total electricity demand in Orange County in 2020 was approximately 19,733 GWh (19,733,139,603 kWh). Therefore, operation of the proposed project would increase annual consumption in Orange County by approximately 0.0005 percent. Because the proposed project would only represent a small fraction of electricity demand in Orange County, and because it would meet Title 24 requirements, there

would be sufficient electricity supplies available, and energy demand for the proposed project would be less than significant. No mitigation is required.

The supply and distribution network within the area surrounding the project site would remain essentially the same as exists currently, with the exception of on-site improvements to serve the proposed project. These on-site improvements would connect to the existing infrastructure and provide electrical service to the proposed residential uses. The proposed project would not increase electrical demand beyond existing projections from the local electricity provider, and the project site is within a developed service area. Therefore, the proposed project would not require the construction of any physical improvements related to the provision of electricity service that would result in significant environmental impacts, and the proposed project's impacts would be less than significant. No mitigation is required.

Natural Gas

***Less Than Significant Impact*.** Southern California Gas Company **(**SoCalGas) is the natural gas service provider for the project site. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000-square-mile service area throughout Central and Southern California, from Visalia to the Mexican border. According to the CEC, total natural gas consumption in the SoCalGas service area in 2020 was 5,231 million therms (CEC 2020c). Total natural gas consumption in Orange County in 2020 was 595 million therms (CEC 2020d). CalEEMod was used to calculate the approximate annual natural gas associated with the proposed project. The estimated potential increase in natural gas demand associated with the proposed project is 310,671 British thermal units (BTU) per year (3.11 therms per year). Because total natural gas consumption in Orange County in 2020 was 595 million therms (594,632,076 therms), the proposed project would negligibly increase the annual natural gas consumption in Orange County. As stated in Section 4.6 above, the proposed project would comply with the 2019 CALGreen Code for energy conservation and green building standards. The proposed project would also be constructed to Title 24 standards, which would help to reduce energy and natural gas consumption. Therefore, the proposed project would not require the construction of any physical improvements related to the provision of natural gas service that would result in significant environmental impact, and the proposed project's potential impacts would be less than significant. No mitigation is required.

Telecommunications Facilities

Less Than Significant Impact. Time Warner/Spectrum and Verizon are the telecommunications providers for the project site. Existing telephone, cable, and internet service lines in the vicinity would continue to serve the project site. The project Applicant would be responsible for constructing adequate telecommunication facility extensions on site for the proposed project. Therefore, the proposed project impacts associated with the relocation or construction of new or expanded telecommunication facilities and impacts would be less than significant. No mitigation is required.

b. Would the project 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. As stated in Response 3.19 (a) above, the City's main sources of water supply are groundwater from the Orange County Groundwater Basin (OC Basin) and imported potable water from the Metropolitan Water District of Southern California provided by the Municipal Water District of Orange County. In fiscal year 2019–2020, the City relied on approximately 50 percent groundwater and 50 percent imported water (City of Garden Grove 2020). It is projected that by 2045, the water supply mix will shift to 85 percent groundwater and 15 percent imported water. The imported water is treated at the Robert B. Diemer Filtration Plant located north of Yorba Linda.

The City's water supply system provides service to a population of nearly 176,635 within the service area (City of Garden Grove 2020). According to the City's *2020 Urban Water Management Plan*, the total average water demand for the customers served by the City is approximately 23,717 acre-feet (af) annually over the last decade (2010 to 2020). The City consumed approximately 21,979 af in the fiscal year 2019-2020, and the projected water demand for 2045 is 22,792 af. According to the *2020 Urban Water Management Plan*, the City's water supplies are projected to increase by 3.7 percent between 2020 and 2045. However, single- and multi-family residential usage is expected to decrease in this timeframe.

According to water demand factors included in the CalEEMod emissions model, the proposed project is estimated to demand approximately 1,031,500 gallons per year (847,000 gallons for indoor use and 185,500 gallons for outdoor use) or 3.17 acre-feet per year (afy) of potable water.[10] Therefore, the estimated increase in water demand associated with the new development proposed as part of the project would represent approximately 0.01 percent of the City of Garden Grove's current annual water demand, based on the system's projected demand of 21,979 af in 2020. The project-generated increase in water demand would be negligible and would fall within the Municipal Water District of Orange County's existing capacity and available supply.

According to the City's *2020 Urban Water Management Plan*, the City's available water supply would meet the future projected demand for normal year demands from 2025 through 2045 because of the diversified supply and conservation measures put in place. Should the need arise, the City can purchase more water from the Municipal Water District of Orange County. For single dry years, a 6 percent increase in demand is expected for the OC Basin area. However, the City would be able to meet the future projected demand in these conditions from 2025 to 2045 with significant reserved from the Municipal Water District, local groundwater supplies, and conservation. For multiple dry years, a 6 percent increase in demand is expected for the OC Basin area compounded over the multiple years. Even with the demand increase of 6 percent each year (for a five consecutive year scenario), the City would be capable of meeting all customers' demands from 2025 to 2045 with significant reserves by the Municipal Water District and conservation. Therefore, the proposed project would not result in insufficient water supplies during normal, dry, and multiple dry years, and impacts related to water supply would be less than significant. No mitigation is required.

[10] 1,031,500 gallons x (1 af / 325851 gallons) = 3.17 af

c. Would the project 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. Although the proposed project would increase wastewater generation on the project site, the increased wastewater flows from the project site would be accommodated within the existing design capacity of OCSD's wastewater treatment plants, Reclamation Plant No. 1 and Treatment Plant No. 2.

The proposed project's wastewater generation would equate to approximately 90 percent of the indoor water use. According to water demand factors included in the CalEEMod emissions model, the proposed project is estimated to demand approximately 1,031,500 gallons per year (847,000 gallons for indoor use and 185,500 gallons for outdoor use) or 3.17 afy of potable water.[11] Therefore, the project would generate approximately 928,350 gallons of wastewater per year, or approximately 2.85 afy. The estimated increase in wastewater associated with the new development proposed as part of the project would represent approximately 0.002 percent and 0.004 percent of the design capacity of OCSD's wastewater treatment plants Reclamation Plant No. 1 and Treatment Plant No. 2, respectively. The project-generated increase in wastewater demand would be negligible and would fall within the Municipal Water District of Orange County's existing capacity and available supply. Therefore, impacts related to wastewater treatment would be less than significant, and no mitigation would be required.

d. Would the project 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. The project currently generates solid waste from the existing residential units on the project site and is served by the Garden Grove Sanitary District which contracts with Republic Services for solid waste services. The proposed project would be required to comply with State and local solid waste reduction, diversion, and recycling policies and regulations. According to CalEEMod calculations, the proposed project would generate 15.18 tons of solid waste per year. Waste from the proposed project would be processed at Olinda Alpha Landfill or Prima Deshecha Landfill. Currently, the Olinda Alpha Landfill permits up to 8,000 tons of waste per day, and the Prima Deshecha Landfill permits up to 4,000 tons of waste per day. According to the most recent inspection, the Olinda Alpha Landfill daily tonnage log indicated that the maximum tonnage accepted since the most recent inspection at the landfill (June 6, 2022) was 7,925 tons. Similarly, the Prima Deshecha Landfill daily tonnage log indicated that the maximum tonnage accepted since the most recent inspection at the landfill (June 1, 2022) was 2,618.94 tons. Therefore, the proposed project would add a small amount of waste for the two landfills which would have adequate capacity to serve the proposed project. Additionally, the project proposes residential uses and would not generate volumes or types of waste not already considered under the General Plan and zoning for the project site, and as addressed under existing policies and regulations. Impacts to solid waste disposal would be less than significant, and no mitigation measures would be required.

[11] 1,031,500 gallons x (1 af /325851 gallons) = 3.17 af

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. The California Integrated Waste Management Act (AB 939) changed the focus of solid waste management from landfill to diversion strategies (e.g., source reduction, recycling, and composting). The purpose of the diversion strategies is to reduce dependence on landfills for solid waste disposal. AB 939 established mandatory diversion goals of 25 percent by 1995 and 50 percent by 2000. According to the City's General Plan Conservation Element, in 2005, approximately 199,737 tons of waste produced by the City was disposed in a landfill while 64 tons were burned at a waste-to-energy facility. Of this, household disposal consisted of 52 percent of waste disposal while business disposal consisted of 48 percent.

The proposed project would comply with existing and future statutes and regulations, including waste diversion programs mandated by City, State, or federal law. In addition, as discussed above, the proposed project would not result in an excessive production of solid waste that would exceed the capacity of the existing landfill serving the project site, as the proposed project is consistent with residential uses planned for the site under the City's General Plan and zoning. Therefore, the proposed project would not result in an impact related to federal, State, and local statutes and regulations related to solid waste, and no mitigation would be required.

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4.20 WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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 instability, or drainage changes?	☐	☐	☐	☒

4.20.1 Impact Analysis

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. According to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP), the proposed project is not located within or near a High or Very High Fire Hazard Severity Zone in either a State Responsibility Area or a Local Responsibility Area (CAL FIRE 2020). Therefore, with respect to wildfire potential, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. No mitigation is required.

b. Would the project, 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?

No Impact. As discussed in Response 4.20 (a), the proposed project is not located within or near a High or a Very High Fire Hazard Severity Zone in either a State Responsibility Area or a Local Responsibility Area (CAL FIRE 2020). The project site and its surrounding areas are relatively flat and located within an urban area. Therefore, the proposed project would not exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No mitigation is required.

c. Would the project 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?

No Impact. As discussed in Response 4.20 (a), the proposed project is not located within or near a High or a Very High Fire Hazard Severity Zone in either a State Responsibility Area or a Local Responsibility Area (CAL FIRE 2020). The project site and surrounding areas are developed with urban uses and the proposed residential development would maintain this character on site. The proposed project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. No mitigation is required.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. As discussed in Response 4.20 (a), the proposed project is not located within or near a High or a Very High Fire Hazard Severity Zone in either a State Responsibility Area or a Local Responsibility Area (CAL FIRE 2020). The topography of the surrounding areas and entire project site is relatively flat. Therefore, the proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No mitigation is required.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

4.21.1 Impact Analysis

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

Less Than Significant with Mitigation Incorporated. As articulated in Section 4.4, Biological Resources, no special-status or endangered species are expected to occur within the project area or to be affected by the proposed project.

Because the vegetation communities and other land cover types on the project site may provide nesting habitats for a wide variety of bird species, the proposed project would be required to avoid impacts on nesting resident and/or migratory birds either by avoiding vegetation removal during the avian nesting season (February 1 through August 31) or by implementing Mitigation Measure (MM) MM-BIO-1.

There is no temporary or permanent removal of riparian or wetland vegetation that may be caused by the proposed project. Temporary indirect impacts to the quality of the environment during project construction activities include the potential for water quality-related impacts such as loose soil or pollutants inadvertently entering the drainage features located within and adjacent to the project area. The proposed project would obtain permits to reduce impacts to less than significant include the NPDES Construction General Permit, the Orange County MS4 Permit, and the Orange County Groundwater Permit. Such impacts would be avoided or minimized with implementation of the

Construction BMPs and Water Quality BMPs as outlined in RC-WQ-1. Additionally, the proposed project would not 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)?

Less Than Significant Impact. The proposed project would result in potentially significant impacts specific to the proposed project for noise. However, with the implementation of the identified mitigation (MM-NOI-1 and MM-NOI-2) and regulatory compliance measures, those impacts would be reduced to a less than significant level. No cumulative noise impacts would occur. The air quality and greenhouse gas analyses included an analysis of cumulative impacts and determined that no cumulatively significant impacts would occur. All other analyses reviewed impacts which were either less than significant, or reduced to less than significant, and would not contribute to cumulative impacts. There are no further mitigation measures that would be required to reduce any cumulative impacts to less than significant levels for the proposed project.

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

Less Than Significant Impact. The following sections in this Initial Study reviewed the potential for adverse impacts on human beings, either directly or indirectly: (4.1) Aesthetics; (4.3) Air Quality; (4.7) Geology and Soils; (4.8) Greenhouse Gas Emissions; (4.9) Hazards and Hazardous Materials; (4.10) Hydrology and Water Quality; (4.13) Noise; (4.14) Population and Housing; (4.15) Public Services; (4.17) Transportation; and (4.20) Wildfire. After analyzing all potential impacts, it has been determined that there would be no adverse effects on human beings associated with implementation of the proposed project. With the implementation of Mitigation Measures MM-GEO-1, MM-GEO-2, MM-NOI-1, and MM-NOI-2 impacts on humans would be less than significant.

5.0 LIST OF PREPARERS

5.1 AGENCY REVIEWERS

5.1.1 City of Garden Grove

The following individuals reviewed and provided input on the Draft Initial Study/Mitigated Negative Declaration (IS/MND) and Technical Reports:

- Mary Martinez, Associate Planner
- Lee Marino, Planning Services Manager

5.2 IS/MND PREPARERS

5.2.1 LSA

The following individuals were involved in the preparation of this Draft IS/MND:

- Ashley Davis, Principal in Charge
- Scott Vurbeff, Senior Environmental Planner/Project Manager
- Amy Fischer, Executive Vice President
- Cara Carlucci, Senior Environmental Planner
- J.T. Stephens, Principal, Noise and Vibration Group
- Moe Abushanab, Mechanical Noise Engineer
- Dean Arizabal, Principal, Transportation Group
- Ivan H. Strudwick, Associate/Archaeologist
- Kerrie Collison, Senior Cultural Resources Manager
- Giana Gurrera, Assistant Environmental Planner
- Tamar Gharibian, Assistant Environmental Planner
- Jason Thomas, Graphics Technician
- Lauren Johnson, Technical Editor
- Chantik Virgil, Senior Word Processor

5.3 TECHNICAL REPORT PREPARERS

The following individuals were involved in the preparation of the technical reports in support of this Draft IS/MND. The nature of their involvement is summarized below.

5.3.1 LGC Geotechnical, Inc.

The following individuals were involved in the preparation of the *Preliminary Geotechnical Report for the Proposed Residential Development at 9071 Lampson Avenue, Garden Grove, California* (May 6, 2022):

- Dennis Boratynec, GE 2770
- Katie Maes, CEG 2216

5.3.2 MDS Consulting

The following individual was involved in the preparation of the *Preliminary Water Quality Management Plan (PWQMP)* (May 14, 2022):

- Ed Lenth, Engineer

5.3.3 Ardent Environmental Group, Inc.

The following individuals were involved in the preparation of the *Phase I Environmental Site Assessment* (May 17, 2022):

- Matthew Penksaw, Senior Staff Scientist
- Craig A. Metheny, C.A.C.

5.3.4 LSA

The following individuals were involved in the preparation of the *Noise and Vibration Impact Memorandum* (June 6, 2022):

- J.T. Stephens, Principal
- Moe Abushanab, Mechanical Noise Engineer

The following individuals were involved in the preparation of the *Air Quality and Greenhouse Gas Technical Memorandum* (June 3, 2022):

- Amy Fischer, Executive Vice President
- Cara Carlucci, Senior Environmental Planner

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MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING REQUIREMENTS

Public Resources Code (PRC) Section 21081.6 (enacted by the passage of Assembly Bill 3180) mandates that where significant effects have been identified, the following requirements shall apply to all reporting or mitigation monitoring programs:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes that have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

- The lead agency shall specify the location and custodian of the documents or other materials that constitute the record of proceedings upon which its decision is based.

- A public agency shall provide measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents that address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.

- Prior to the close of the public review period for a Draft Environmental Impact Report (EIR), a responsible agency, or a public agency having jurisdiction over natural resources affected by the project, shall either (1) submit to the lead agency complete and detailed performance objectives for mitigation measures that would address the significant effects on the environment identified by the responsible agency or agency having jurisdiction over natural resources affected by the project, or (2) refer the lead agency to appropriate, readily available guidelines or reference documents. Any mitigation measures submitted to a lead agency by a responsible agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures that mitigate impacts to resources that are subject to the statutory authority of, and definitions applicable to, that agency. Compliance or noncompliance with that requirement by a responsible agency or agency having jurisdiction over natural resources affected by a project shall not limit the authority of the responsible agency or agency having jurisdiction over natural resources affected by a project, or the authority of the lead agency, to approve, condition, or deny projects as provided by this division or any other provision of law.

MITIGATION MONITORING PROCEDURES

The mitigation monitoring and reporting program has been prepared in compliance with PRC Section 21081.6. It describes the requirements and procedures to be followed by the City of Garden Grove (City) to ensure that all mitigation measures adopted as part of the proposed Lampson

Avenue Residential Project at 9071, 9081, and 9091 Lampson Avenue (proposed project) will be carried out as described in the Final EIR.

Table 1.A lists each of the mitigation measures specified in the Draft EIR and identifies the party or parties responsible for implementation and monitoring of each measure. Table 1.A only includes resources which were evaluated in the Draft EIR, biological resources, geology and soils, noise, and tribal cultural resources.

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
4.4 BIOLOGICAL RESOURCES				
MM-BIO-1	**Nesting Bird Survey and Avoidance.** If vegetation removal, construction, or grading activities are planned to occur within the active nesting bird season (February 1 through August 31), the City of Garden Grove Director of Community and Economic Development, or designee, shall confirm that the Applicant has retained a qualified biologist who shall conduct a preconstruction nesting bird survey no more than 3 days prior to the start of such activities. The nesting bird survey shall include the work area and areas adjacent to the site (within 500 feet, as feasible) that could potentially be affected by project-related activities such as noise, vibration, increased human activity, and dust. For any active nest(s) identified, the qualified biologist shall establish an appropriate buffer zone around the active nest(s). The appropriate buffer shall be determined by the qualified biologist based on species, location, and the nature of the proposed activities. If active nests are present at the time of survey, the buffer shall be deemed effective by the qualified biologist if nesting birds do not appear to be affected by construction activities and young birds successfully fledge from the nest. Project activities shall be avoided within the buffer zone until the nest is deemed no longer active, as determined by the qualified biologist.	No more than 3 days prior to the start of vegetation removal, construction, or grading activities that are planned to occur within the active nesting bird season (February 1 through August 31).	City of Garden Grove Director of Community and Economic Development, or designee	
4.5 GEOLOGY AND SOILS				
MM-GEO-1	**Geotechnical Plan Review.** Prior to grading and building permit issuance, project construction plans shall be reviewed by the City of Garden Grove's (City) Land Development Section in order to verify that all geotechnical recommendations provided in the project's *Preliminary Geotechnical Report* (LGC Geotechnical, Inc. 2022) and the final geotechnical report are implemented to address on-site geotechnical constraints, including recommendations to address liquefaction, subsidence, and importation of	Prior to grading and building permit issuance (for geotechnical plan review) and during grading, during utility trench backfill and compaction, after presoaking building pads and other concrete-flatwork subgrades, and prior to placement of aggregate base	City of Garden Grove's (City) Land Development Section (for geotechnical plan review) and the project engineer (for geotechnical observation and/or testing)	

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
	expansive fill material. Recommendations outlined in the *Preliminary Geotechnical Report* to address liquefaction, subsidence, and importation of expansive material include designing post-tensioned foundations for the conservative seismic settlement due to liquefaction, as moisture conditioning of the subgrade soils prior to trenching the foundation, interconnecting any isolated structural pad footings with grade beams, evaluating foundation plans of required infiltration systems that are adjacent to foundations, and importing soils that consist of "very low" expansion potential with an expansion index of 20 or less per ASTM S4829 for general fill. The geotechnical recommendations shall be included on the grading and building plans to the satisfaction of the City. Geotechnical observation and/or testing should be performed by the project engineer at the following stages: • During grading (removal bottoms, fill placement, etc.); • During utility trench backfill and compaction; • After presoaking building pads and other concrete-flatwork subgrades, and prior to placement of aggregate base or concrete; • Preparation of pavement subgrade and placement of aggregate base; • After building and wall footing excavation and prior to placing steel reinforcement and/or concrete; and • When any unusual soil conditions are encountered during any construction operation subsequent to issuance or this report.	or concrete, after building and wall footing excavation and prior to placing steel reinforcement and/or concrete, and when any unusual soil conditions are encountered during any construction operation subsequent to issuance or this report (for geotechnical observation and/or testing)		
MM-GEO-2	**Paleontological Resources.** Prior to grading permit issuance, grading plans shall indicate that in the event that paleontological resources are encountered during project construction, work in the immediate area of the find shall	Prior to grading permit issuance	A qualified paleontologist from the Orange County List of Qualified Paleontologist	

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
	be redirected. Subsequently, the Applicant shall retain, with the approval of the City of Garden Grove's (City) Community Development Director, or designee, a qualified paleontologist from the Orange County List of Qualified Paleontologists to assess the findings for scientific significance. If any fossil remains are discovered in sediments with a low paleontological sensitivity rating (Young Alluvial Fan Deposits), the paleontologist shall make recommendations as to whether monitoring shall be required in these sediments on a full-time basis.			
4.13 NOISE				
MM-NOI-1	**HVAC Equipment.** Prior to issuance of building permits, the City's Community Development Director, or designee, shall verify that building plans indicate that mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC]) shall have a sound rating of less than 66.6 A-weighted decibels (dBA) when measured at more than 35 feet from the project property line to assure compliance with the City's Noise Ordinance. Should HVAC equipment be louder or closer than those details provided above, the applicant would be required to retain an acoustical engineer to model noise levels and confirm that noise levels would comply with City exterior noise standards, prior to issuance of a certificate of occupancy. In this circumstance, a follow-up noise memorandum shall be prepared by the acoustical engineer and submitted to the City's Community Development Director, or designee, for approval.	Prior to issuance of building permits	The City's Community Development Director, or designee	
MM-NOI-2	**Construction Vibration Damage.** Due to the close proximity to surrounding structures, the City's Community Development Director, or designee, shall verify prior to issuance of demolition and grading permits, that demolition and grading plans shall require the construction contractor to implement the following mitigation measures during	Prior to issuance of demolition and grading permits	The City's Community Development Director, or designee	

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
	project construction activities to ensure that damage does not occur at surrounding structures: • Identify structures that are located within 5 feet (ft) of heavy construction activities and that have the potential to be affected by ground-borne vibration. This task shall be conducted by a qualified structural engineer as approved by the City's Community Development Director, or designee. • Develop a vibration monitoring and construction contingency plan for approval by the City's Community Development Director, or designee, to identify structures where monitoring would be conducted; set up a vibration monitoring schedule; define structure-specific vibration limits to avoid damage; and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies would be identified for when vibration levels approached the limits. The contingencies may include, but are not limited to use of smaller equipment, increased distance requirements, and alternative construction methods. • At a minimum, monitor vibration during initial demolition activities. Monitoring results may indicate the need for more or less intensive measurements. • When vibration levels approach limits, suspend construction and implement contingencies as identified in the approved vibration monitoring and construction contingency plan to either lower vibration levels or secure the affected structures.			
4.18 TRIBAL CULTURAL RESOURCES				

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
MM-TCR-1	**Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities.** The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial	Prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations	The project applicant/lead agency	

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
	goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the Tribe. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.			

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
MM-TCR-2	**Unanticipated Discovery of Human Remains and Associated Funerary Objects.** Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute. If Native American human remains and/or grave goods discovered or recognized on the project site, then all construction activities shall immediately cease. Health and Safety Code Section 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and all ground-disturbing activities shall immediately halt and shall remain halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe they are Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission, and Public Resources Code Section 5097.98 shall be followed. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Construction activities may resume in other parts of the project site at a minimum of 200 feet away from discovered human remains and/or burial goods, if the Kizh determines in its sole discretion that resuming construction activities at that distance is acceptable and provides the project manager express consent of that determination (along with any other mitigation measures the Kizh monitor and/or	Immediately after Native American human remains and/or grave goods are discovered or recognized on the project site	The project applicant/lead agency	

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
	archaeologist deems necessary). (CEQA Guidelines Section 15064.5(f).) Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.			
MM-TCR-3	**Procedures for Burials and Funerary Remains.** As the Most Likely Descendant ("MLD"), the Koo-nas-gna Burial Policy shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the preparation of the soil for burial, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. If the discovery of human remains includes four or more burials, the discovery location shall be treated as a cemetery and a separate treatment plan shall be created. The prepared soil and cremation soils are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed	Immediately after the discovery of human remains which includes four or more burials	The project applicant/lead agency	

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
	to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects. Cremations will either be removed in bulk or by means as necessary to ensure complete recovery of all sacred materials. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. In the event preservation in place is not possible despite good faith efforts by the project applicant/developer and/or landowner, before ground-disturbing activities may resume on the project site, the landowner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner			

TABLE 1.A: LAMPSON AVENUE RESIDENTIAL PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

No.	Mitigation Measure	Timing of Completion	Responsible Party	Completion Date and Team Member Initials
	at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered. The Tribe will work closely with the project's qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be prepared and shall include (at a minimum) detailed descriptive notes and sketches. All data recovery data recovery-related forms of documentation shall be approved in advance by the Tribe. If any data recovery is performed, once complete, a final report shall be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains.			

FINAL

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

LAMPSON AVENUE RESIDENTIAL PROJECT

GARDEN GROVE, CALIFORNIA

LSA

December 2022

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FINAL

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

LAMPSON AVENUE RESIDENTIAL PROJECT

GARDEN GROVE, CALIFORNIA

Submitted to:

City of Garden Grove
11222 Acacia Parkway
Garden Grove, California 92840

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Project No. CGG2201

December 2022

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1.0 INTRODUCTION

This document comprises the Final Initial Study/Mitigated Negative Declaration (IS/MND) for the proposed Lampson Avenue Residential (project) at 9071, 9081, and 9091 Lampson Avenue. It is composed of an Errata section that clarifies, amplifies, or makes minor modifications to the Draft IS/MND text. The Draft IS/MND and technical appendices are bound separately.

In compliance with Section 15201 of the *State California Environmental Quality Act (CEQA) Guidelines*, the City of Garden Grove (City) has provided opportunities for public participation in the environmental process.

The California Environmental Quality Act (CEQA) requires a Draft IS/MND to have a review period lasting at least 30 days for projects that have been submitted to the California State Clearinghouse for review (*State CEQA Guidelines*, Section 150102). As required by the *State CEQA Guidelines* Section 15072, the City provided a public Notice of Intent (NOI) to adopt the Draft MND for the proposed project at the same time it filed a Notice of Completion (NOC) with the State Clearinghouse. The Draft IS/MND was circulated for public review for a period of 30 days, from October 20, 2022, to November 18, 2022.

The City used several media to solicit comments on the Draft IS/MND. The NOI and IS/MND were mailed to interested parties and public agencies and organizations that had expressed interest. The City submitted the Draft IS/MND to the State Clearinghouse for distribution to, and review by, State agencies. The City made copies of the Draft IS/MND available at the Planning Services Counter of the City of Garden Grove City Hall. In addition, the City posted the Draft IS/MND and all technical appendices on the City's website.

The City did not receive any comment letters on the Draft IS/MND during the public review period, and therefore, the Final IS/MND does not include any responses to comments or revisions from public input during the public review period. Proposed revisions are based on a recent Code Amendment that reduced the minimum lot size for a residential Planned Unit Development (PUD) to one acre. These revisions to the Draft IS/MND are included in Chapter 2.0, Errata, and do not constitute significant new information, change the conclusions of the environmental analysis, or require recirculation of the document (*State CEQA Guidelines,* Section 15088.5).

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2.0 ERRATA

This section of the Final Environmental Impact Report (EIR) provides text changes to the Draft EIR that have been made to clarify, amplify, or make minor edits to the Draft EIR text for the proposed Lampson Avenue Residential Project (proposed project) located at 9071, 9081, and 9091 Lampson Avenue in the City of Garden Grove. Such changes are a result of the City's further review of the Draft EIR and a recent Code Amendment that reduced the minimum lot size for a residential PUD to one acre. The changes described in this section are generally minor changes that do not constitute significant new information, change the conclusions of the environmental analysis, or require recirculation of the document (*State CEQA Guidelines,* Section 15088.5).

Such changes to the Draft EIR are indicated in this section under the appropriate Draft EIR section. Deletions are shown with ~~strikethrough~~ and additions are shown with <u>underline.</u>

Chapter 1.0, Project Information

Item 10, Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreements) on page 1-2 has been revised in response to a recent Code Amendment that reduced the minimum lot size for a residential PUD to one acre. This change has no effect on the analysis or conclusions contained in the Draft EIR.

10. Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreements):

a) City of Garden Grove: Adoption of the Initial Study/Mitigated Negative Declaration (IS/MND) and approval of: a Site Plan to construct the 13 two-story homes along with associated site improvements, zone change from R-1-7 to Planned Unit Development (PUD)~~, and variance to deviate from the minimum 3-acre requirement to allow a zone change to PUD~~, and a Vesting Tentative Tract Map to subdivide the subject properties.

Chapter 2.0, Project Description

Section 2.2, Proposed Project Characteristics, in Chapter 2.0, Project Description, has been revised in response to a recent Code Amendment that reduced the minimum lot size for a residential PUD to one acre. This change has no effect on the analysis or conclusions contained in the Draft EIR.

The following revisions were made on page 2-11 in Section 2.2, Proposed Project Characteristics:

> The Applicant is requesting approval of the following discretionary actions and entitlements as part of the proposed project: (1) a zone change from R-1-7 to a Planned Unit Development (PUD), ~~(2) variance to deviate from the minimum 3-acre requirement to allow a zone change to a PUD,~~ (~~3~~<u>2</u>) approval of a Vesting Tentative Tract Map to subdivide the subject properties, (3) approval of a Site Plan to construct the 13 two-story homes along with associated site improvements, and (4) adoption of the IS/MND.

Section 2.2.8, Variance to Deviate from the Minimum 3-Acre Requirement in Chapter 2.0, Project Description, has been removed in response to a recent Code Amendment that reduced the minimum lot size for a residential PUD to one acre. This change has no effect on the analysis or conclusions contained in the Draft EIR.

The following text deletion was made on page 2-19 in Section 2.2, Proposed Project Characteristics:

> ~~**2.2.8 Variance to Deviate from the Minimum 3-Acre Requirement**~~
>
> ~~The proposed project involves a variance from the requirement that a PUD for a residential development must be a minimum of 3 acres. Per Section 9.12.030.020 of the Garden Grove Municipal Code, "planned unit development procedures shall apply only to those individual sites having a net area of… three acres for residential developments." Because the proposed project site is a net of 1.6 acres, a variance from this requirement would allow for the proposed residential development to be constructed.~~

Section 2.4, Required Permits and Approvals in Chapter 2.0, Project Description, has been removed in response to a recent Code Amendment that reduced the minimum lot size for a residential PUD to one acre. This change has no effect on the analysis or conclusions contained in the Draft EIR.

The following revisions were made on page 2-20 in Section 2.2, Proposed Project Characteristics:

> In accordance with Sections 15050 and 15367 of the *State CEQA Guidelines*, the City is the designated Lead Agency for the proposed project and has principal authority and jurisdiction for CEQA actions and project approval. Responsible Agencies are those agencies that have jurisdiction or authority over one or more aspects associated with the development of a proposed project and/or mitigation. Trustee Agencies are State agencies that have jurisdiction by law over natural resources affected by a proposed project.
>
> The discretionary actions to be considered by the City as a part of the proposed project include:
>
> - Adoption of the IS/MND
> - Zone change from R-1-7 to PUD
> - Site Plan approval to construct the 13 two-story homes along with associated site improvements
> - Vesting Tract Map approval to subdivide the subject properties
> - ~~Variance to deviate from the minimum 3-acre requirement to allow a zone change to PUD~~

Chapter 4.0, CEQA Environmental Checklist

The response to 4.14, Population and Housing (a) in Section 4.14.1 in Chapter 4.0, CEQA Environmental Checklist, has been revised in response to a recent Code Amendment that reduced the minimum lot size for a residential PUD to one acre. This change has no effect on the analysis or conclusions contained in the Draft EIR.

The following revisions were made on page 4.14-1 in Section 4.14.1(a):

> ***Less Than Significant Impact.*** The project site is currently developed and located within an urban area of the City of Garden Grove (City). Approval of the project involves a zone change to a Planned Unit Development (PUD), ~~a variance to deviate from the minimum 3-acre requirement to allow a zone change to a PUD,~~ approval of a Vesting Tentative Tract Map and Site Plan, and construction of 13 single-family units with private recreational areas, an open space parcel, and two private streets.
>
> According to the United States Census Bureau 2020 Decennial Census data, the population in the City of Garden Grove is approximately 171,949. As articulated in Section 4.15, Public Services, below, the proposed project would result in an increase of approximately 47 residents.[1] This increase in population would incrementally increase the City's population by 0.03 percent to 171,996 residents. Southern California Association of Governments' (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) forecasts that the population for the City of Garden Grove would increase from 176,000 in 2016 to approximately 185,800 people by the year 2045 (SCAG 2020). The projected increase of 47 residents from the proposed project represents approximately 0.5 percent of the forecasted projected growth for the City, and therefore, the proposed project would be consistent with the SCAG growth projections.[2] Additionally, the City's Regional Housing Needs Assessment (RHNA) for the 2021–2029 planning period identifies that the City's future housing need is 19,168 units for very-low income, low income, moderate income, and above moderate income households (City of Garden Grove 2021). The project would contribute toward the City's future housing need for the 2021–2029 planning period.
>
> The proposed project's forecasted population growth accounts for less than one percent of the City's overall population and is within the City's population forecast, and it would also contribute to the City's future housing needs. Therefore, the project would not induce substantial unplanned population growth, and the effects would be less than significant. No mitigation is required.

1 Proposed project residents: 13 single-family residential units x 3.57 persons/household (according to United States Census Bureau 2020 Decennial Census Data) = 46.4 persons.
Net increase of residents: 47 additional persons – (3 existing single-family residential units x 3.57 persons/household) = 36 persons.

2 SCAG's forecasted growth from 2016 to 2045 in the City is 176,000 to 185,800 (addition of 9,800 residents) (47 new residents from proposed project)/(population growth of 9,800) = 0.5 percent.

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