

Initial Study / Mitigated Negative Declaration

MorningStar of Mission Viejo Senior Living Project
Mission Viejo, California



November 14, 2019

Initial Study / Mitigated Negative Declaration

MorningStar of Mission Viejo Senior Living Project

Lead Agency:



City of Mission Viejo
Community Development Department
200 Civic Center
Mission Viejo, CA 92691

Project Applicant:

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November 14, 2019



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LIST OF TECHNICAL APPENDICES

The documents identified below are included within the Technical Appendices to this Initial Study (IS) / Mitigated Negative Declaration (MND), and are herein incorporated by reference pursuant to CEQA Guidelines Section (§)15150. These documents are attached to this IS/MND and are available for review at the City of Mission Viejo, Community Development Department, 200 Civic Center, Mission Viejo, CA 92691, during regular business hours.

- A. Air Quality Impact Analysis
- B. Phase I Cultural Resources Survey
- C. Energy Analysis
- D. Geotechnical Exploration Report
- E. Paleontological Resources Assessment
- F. Greenhouse Gas Analysis
- G. Hazardous Materials Reports
- H. Preliminary Water Quality Management Plan
- I. Preliminary Hydrology Study
- J. Noise Impact Analysis
- K. Trip Generation Analysis



1.0 Introduction

This Initial Study (IS)/Mitigated Negative Declaration (MND) evaluates the MorningStar of Mission Viejo Senior Living Project (Project) proposed by Confluent Development (Project Applicant). The Project Applicant proposes to construct and operate a congregate care facility/senior living community on an approximately 2.9-acre parcel (Project site) located north of Avery Parkway and east of Marguerite Parkway, at 28570 Marguerite Parkway, in the City of Mission Viejo, Orange County, California. Under existing conditions, the Project site is developed with a commercial/retail building and associated surface parking with a landscaped engineered slope in the eastern portion of the Project site.

1.1 Purpose of this Document

The Project is the subject of analysis in this document pursuant to the California Environmental Quality Act (CEQA). The content of this IS/MND complies with the criteria, standards, and procedures of CEQA (California Public Resource Code § 21000 et seq.) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, § 15000 et seq.).

CEQA is a statewide environmental statute contained in Public Resources Code §§21000-21177 that applies to most public agency decisions to carry out, authorize, or approve actions that have the potential to adversely affect the environment. CEQA requires that before a public agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about the project's potential environmental impacts, give the public an opportunity to comment on the environmental issues, and take feasible measures to avoid or reduce potential harm to the physical environment.

As defined by CEQA Guidelines §15367, the City of Mission Viejo is the Lead Agency for the Project. "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. The primary discretionary approvals required of the City of Mission Viejo for the Project are a Zone Change (consisting of a Zoning Map Amendment to place a Senior Housing Overlay on the Project site), a Planned Development Permit to allow for the proposed use, and a variance to allow for a slight exceedance of the maximum height limit. These actions and other approval actions required of the City of Mission Viejo and/or other governmental agencies are described in more detail in Section 2.0, Project Description, of this IS/MND. If this IS/MND is adopted by the City of Mission Viejo, agencies with approval authorities over the Project can use this IS/MND as the CEQA compliance document as part of their decision-making processes.

1.2 CEQA Requirements for Mitigated Negative Declarations (MNDs)

An MND is a written statement by the Lead Agency briefly describing the reasons why a proposed project, which is not exempt from the requirements of CEQA, will not have a significant effect on the environment and therefore does not require preparation of an Environmental Impact Report (EIR) (CEQA Guidelines §15371). The CEQA Guidelines require the preparation of a MND if the IS prepared for a project shows that there is no substantial evidence, in light of the whole record before the Lead Agency, that the project may have a significant effect on the environment; or the Initial Study identifies potentially significant effects, but: 1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed MND and IS are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and 2) there is no substantial evidence, in light of the whole record before the Lead Agency, that the project as revised may have a significant effect on the environment (CEQA Guidelines §15070).



This IS includes the location of the Project site; a description of the Project; an evaluation of the Project's potential environmental impacts; the findings of the environmental analyses; and proposed mitigation measures to lessen or avoid the Project's potential impacts on the environment.

1.3 Preparation of Initial Study and Summary of Findings

The City of Mission Viejo Community Development Department directed and supervised the preparation of this IS/MND. Although prepared with assistance of the consulting firm T&B Planning, Inc. (refer to Section 6.0, Persons Contributing to this Document, of this IS/MND) the content contained within and the conclusions drawn by this IS/MND reflect the sole independent judgment of the City of Mission Viejo.

Based on the environmental checklist and supporting environmental analysis (provided in Section 3.0), with adherence to applicable regulatory requirements, the Project would have no impact or less than significant impacts for the following environmental issue areas: aesthetics, agricultural and forestry resources, air quality, cultural resources, energy, greenhouse gas (GHG) emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire.

The Project's impacts for the following issue areas would be less than significant with the implementation of Project-specific mitigation measures: biological resources (potential disruption to nesting birds, geology, and soils (including paleontological resources, and noise (interior noise levels at the proposed building and construction-related vibration noise levels). All impacts would be less than significant after mitigation.

According to the State CEQA Guidelines, it is appropriate for the City to adopt an MND for the Project because, with the incorporation of recommended mitigation measures, the Project's potentially significant environmental impacts would be eliminated or reduced to levels considered less than significant.

1.4 Processing of the Initial Study/Mitigated Negative Declaration

This IS/MND and Notice of Intent (NOI) to adopt the IS/MND will be distributed to the following entities for a 20-day public review period: 1) organizations and individuals who have previously requested such notice writing to the City of Mission Viejo, 2) responsible agencies and other potentially affected agencies; and, 3) the Orange County Clerk.

The NOI identifies the location(s) where the IS/MND and its associated Technical Appendices are available for public review. The environmental documentation is available for review on the City's website: <https://cityofmissionviejo.org/departments/community-development/planning> and at the following locations:

- City of Mission Viejo Community Development Department
200 Civic Center
Mission Viejo, CA 92691
(949) 470-3053

Hours: 8:00 AM to 5:00 PM Monday through Friday



- Mission Viejo Library
200 Civic Center
Mission Viejo, CA 92691
(949) 830-7100

Hours: 10:00 AM to 9:00 PM Monday through Thursday
1:00 PM to 5:00 PM Friday
10:00 AM to 5:00 PM Saturday
12:00 PM to 5:00 PM Sunday

In addition, the NOI has been posted at the Project site and at the City of Mission Viejo City Hall, and published in a newspaper of general circulation in the Project area. The NOI also establishes a 20-day public review period. In reviewing the IS and MND, affected public agencies and interested members of the public should focus on the adequacy of the document in identifying and analyzing the potential environmental impacts and the ways in which the potentially significant effects of the project can be avoided or mitigated. Comments on the IS and MND and the analysis contained herein may be sent to:

Nick Lagura, Associate Planner
City of Mission Viejo Community Development Department
200 Civic Center
Mission Viejo, CA 92691
nlagura@cityofmissionviejo.org

Following the 20-day public review period, the City of Mission Viejo will review comments letters received and determine whether any substantive comments were provided that may warrant revisions to the IS/MND document. If substantial revisions are not necessary (as defined by CEQA Guidelines §15073.5(b)), then the IS/MND will be finalized and forwarded to the City of Mission Viejo Planning Commission and City Council for review as part of their deliberations concerning the Project. Public hearings will be held before the City's Planning Commission and City Council to consider the Project and the adequacy of this IS/MND; public comments will be heard and considered at the hearings. If no further environmental documentation is required, the City may adopt the MND. A Notice of Determination (NOD) will be filed with the County of Orange Clerk following approval of the Project and adoption of the MND.



2.0 Project Description

2.1 Project Location

The Project site encompasses 2.92 gross acres and is located east of Marguerite Parkway, just north of Avery Parkway, at 28570 Marguerite Parkway (Assessor's Parcel Number [APN] 740-012-21), in the City of Mission Viejo. The City of Mission Viejo is located in the south-central portion of Orange County and is bordered to the north by the City of Lake Forest, to the east by the City of Rancho Santa Margarita and unincorporated communities in Orange County (e.g., Las Flores and Ladera Ranch), to the south by the City of San Juan Capistrano, and to the west by the City of Laguna Hills and the City of Laguna Niguel. Local access to the Project site is provided via Avery Parkway and Marguerite Parkway. Regional access is provided via Interstate 5 (I-5). The regional and local vicinity of the Project site are depicted on Figure 2-1, Regional and Vicinity Map.

2.2 Environmental Setting

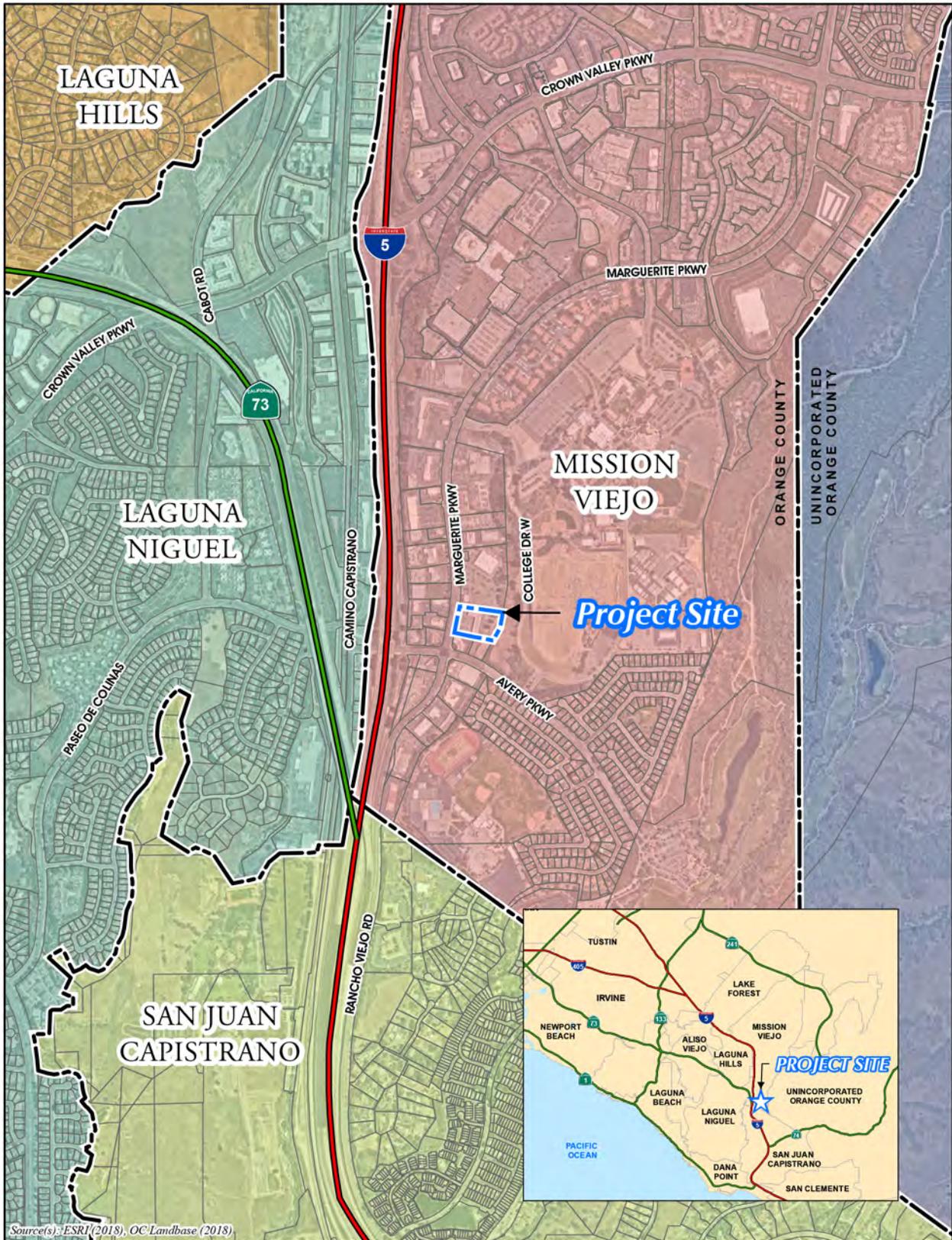
CEQA Guidelines §15125 establishes requirements for defining the environmental setting to which the environmental effects of a proposed project must be compared. "Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced..." (CEQA Guidelines § 15125(a)(1)). The Initial Study prepared for the Project determined that an MND is the appropriate form of CEQA compliance document, which does not require a Notice of Preparation. Thus, the environmental setting for the Project is the approximate date that the Project's environmental analysis commenced. Accordingly, the environmental setting for the Project is defined as the physical environmental conditions on the Project site as they existed in July 2019, when environmental review of the Project commenced.

2.2.1 Project Site and Surrounding Uses

As shown on Figure 2-2, Aerial Photograph, the Project site is currently developed with a 2-story, 38,600 square foot (sf) mixed-use building, and surface parking areas are located east and west of the building. Existing uses include, but are not limited to, an auto upholstery shop, auto repair shop, a printing shop, a window tinting facility, a deli, a salon, wellness centers, offices, and a car rental facility. The existing building is referred to herein as "commercial/retail" building.

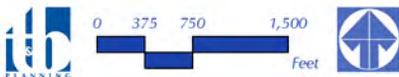
The Project site is surrounded by existing restaurant and commercial uses to the north; commercial and office uses to the west, across Marguerite Parkway; Saddleback College to the east; and commercial uses to the south, north of Avery Parkway. There are commercial and residential uses further to the south, across Avery Parkway. Saddleback College is currently completing construction of new athletic facilities in the southwest portion of the campus, including a new driving range and stadium. Existing sources of light in the area include street lights, parking lot and exterior building lights at surrounding uses, and lighting at Saddleback College (including athletic field lighting).

Vehicular access to the Project site is from an existing full access driveway and a restricted right-in/right-out existing driveway along Marguerite Parkway. There is a drive aisle along the northern Project site boundary that is shared with the property to the north. Sidewalks and on-street striped bikeways are provided along both sides of Marguerite Parkway and Avery Parkway in the vicinity of the Project site.



Source(s): ESRI(2018), OC Landbase (2018)

Figure 2-1



REGIONAL AND VICINITY MAP

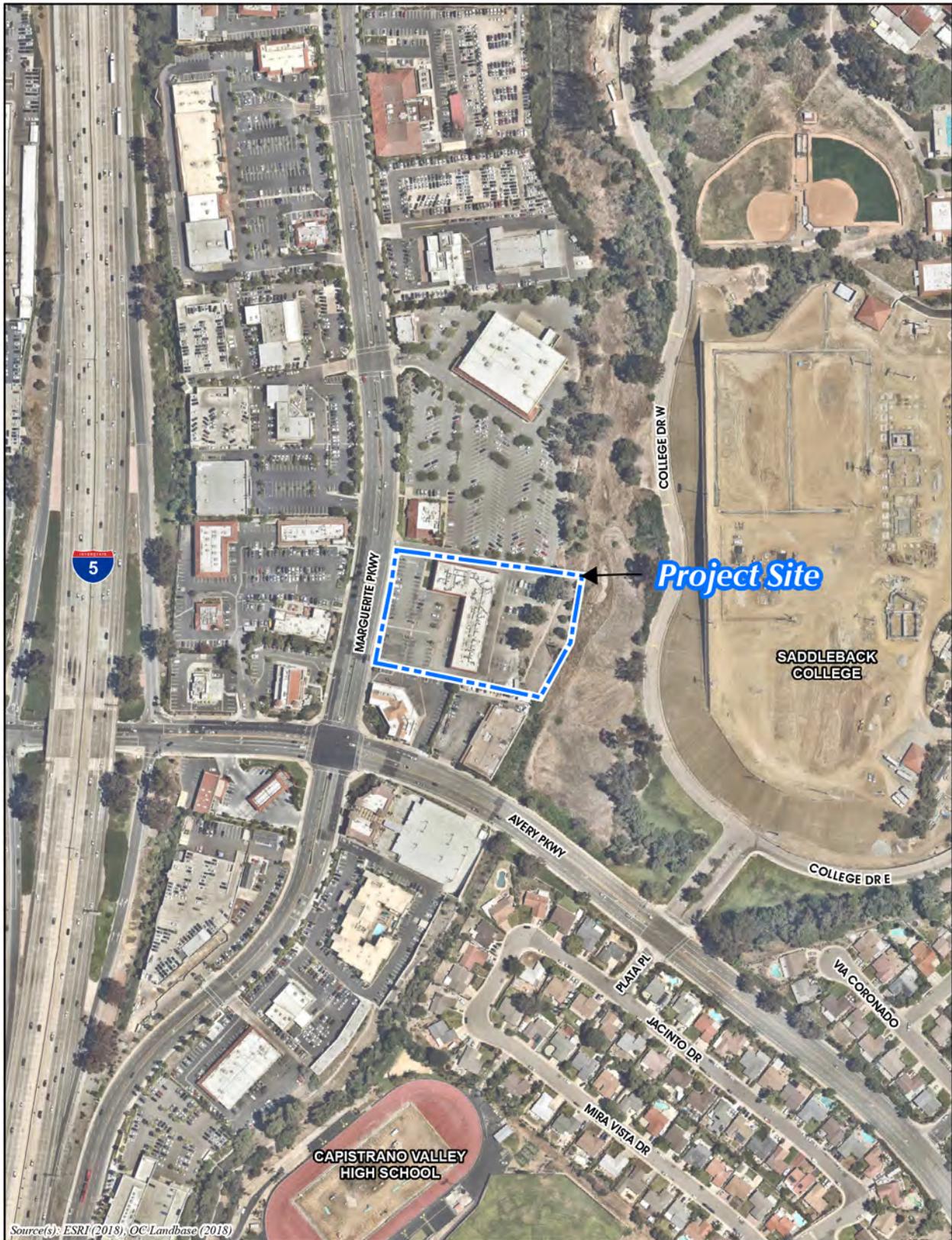
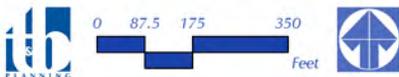


Figure 2-2



AERIAL PHOTOGRAPH



The developed portion of the Project site is relatively flat with elevations ranging from approximately 259 feet above mean sea level (amsl) in the northeastern portion of the site to 252 feet amsl in the southwest portion of the site. The eastern portion of the Project site is an ascending engineered slope rising at a gradient of 1.5:1 to 1.8:1 (horizontal: vertical) from the parking lot. The elevation of the engineered slope ranges from approximately 259 feet amsl at the parking lot to 340 feet amsl off-site (approximately 81 feet). The Project site includes ornamental landscaping consisting of trees and shrubs; there are eucalyptus trees planted on the slope.

Storm water runoff from the Project site sheet flows from east to west, and is intercepted in an existing catch basin within Marguerite Parkway. Off-site storm water flows are conveyed via an existing storm drain around the Project site to Marguerite Parkway. Static groundwater was not encountered in soil borings extending to depths of 50 feet below the ground surface (bgs); however, light seepage was encountered. Historic high groundwater levels are deeper than 20 feet bgs. Wet and dry utility infrastructure serving the Project site is in Marguerite Parkway and the drive aisle north of the site.

2.2.2 City of Mission Viejo General Plan and Zoning

The Project site has a “Commercial Highway” land use designation in the City’s General Plan and is also zoned CH (Community Highway) (City of Mission Viejo, 2019). The Commercial Highway designation is intended to provide highway-oriented business that provide goods and services to a broad population utilizing major transportation corridors. Specialized housing designed to meet the physical and social needs of senior citizens is allowed in Commercial Highway-designated areas, provided the property is located within a Senior Housing Overlay Zone (City of Mission Viejo, 2013b). Congregate care/senior housing is allowed in the CH zone, also within a Senior Housing Overlay Zone, and subject to a Planned Development Permit. The areas to the north, south and west also have a Commercial Highway land use designation and are zoned CH. The land use designation for the Saddleback College campus, to the east, is Community Facility, and the campus is zoned CF (Community Facility).

2.3 Project Description

The Project involves redevelopment of the Project site with a congregate care facility, also referred to as a senior living community. The entire Project would be licensed as an Assisted Living Facility Residential Care Facility for the Elderly (“RCFE”). The Project would be developed in compliance with applicable provisions of the City’s Municipal Code, including established development standards (with the exception of the maximum height limit for which a variance is being requested). A description of the following components of the Project is provided below and the conceptual site plan is provided in Figure 2-3.

- Building Characteristics and Operations
- Circulation and Parking
- Open Space/Landscaping, Walls, Signage, and Lighting
- Utility Infrastructure

2.3.1 Building Characteristics and Operations

The Project involves the development of an approximately 166,000 sf structure with three-levels above ground and one subterranean parking level in the previously developed portion of the Project site. Up to 132 units with 166 beds would be provided for Assisted Living (AL, 102 units and 136 beds), and Memory Care (MC, 30 units and 30 beds) (refer to Figure 2-4, Conceptual Building Plans (Levels 1 – 3)). The AL units would include studio, one bedroom/one bathroom, and two bedrooms/two-bathroom floor plans. The

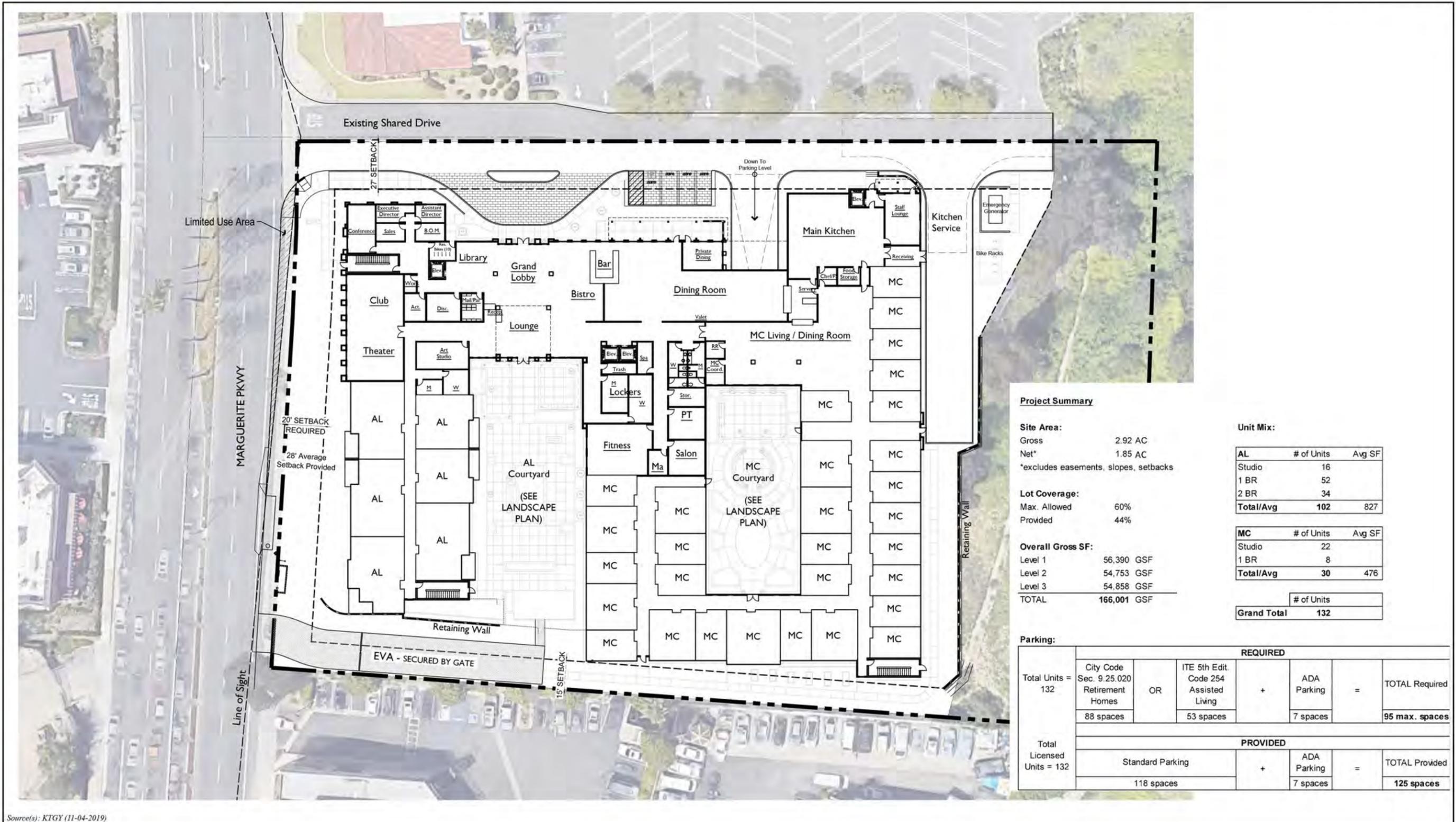


MC units would include studio and one bedroom/one-bathroom floor plans. As shown on Figure 2-4, AL and MC units, resident services and amenities, office space, and a staff lounge for employees would be provided on the ground level. AL units would be provided on the second and third levels. Laundry, housekeeping, maintenance, and storage space would be provided in the northeast portion of the subterranean parking level, along with employee bicycle storage. The Project would be developed in accordance with the 2019 CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, and CCR Title 24, Part 11: California Green Building Standards Code (CALGreen), which become effective January 1, 2020, which are further discussed in the Air Quality Impact Analysis included in Appendix A and Energy Section of this IS/MND. It should be noted that while the Project currently does not include solar energy generation, the building roof structure would be designed to support solar panels in the future, as required by the 2019 Title 24 Building Energy Efficiency Standards

Proposed amenities include but are not limited to: two private courtyards (refer to Section 2.3.3, Landscaping/Courtyards, Walls, and Lighting), two dining rooms that also function as gathering spaces for the residents (both dining rooms would be served by one commercial kitchen), a multi-purpose room that can serve as a theater and community room, a library, an art studio, a salon, and a fitness room.

The proposed building has been designed to be visually compatible with similar architectural elements of Andalusian and Spanish traditional influences that are prevalent in Mission Viejo. Conceptual building elevations are provided on Figure 2-5 (a and b), and conceptual buildings renderings are provided on Figure 2-6 (a and b). As shown on Figure 2-5, the horizontal parapet portions of the roof on the building sit below the 35-foot height limit except for the southeast corner, which rises to 38-feet to create interest in that portion of the building. The sloped portions of the roof range from 37-feet to 38-feet to allow for variations in the aesthetics, thereby eliminating the "sameness" and "flat" appearance that would come from maintaining a 35-foot limit across the entire project. In addition, there is a distinct Spanish-style chimney element in northwest corner of the building that rises to 41-feet. Additionally, in the southwest corner of the building, the adjacent finished grade is retained by a wall to accommodate the emergency vehicle access drive from Marguerite Parkway. The result in this single location (one side of one corner of the building) is a building height of 40-feet from finished grade to the highest nearby building peak. It is 35-feet from that finished grade to the highest structure at the building corner. The building materials would consist primarily of stucco with stone, wood, decorative tile, and tile roof enhancements. Wood balconies and metal railings would also be provided.

The Project would operate 24 hours a day, 7 days a week. A variable staffing model would be used based on resident acuity. The number of employees would range between 75 and 85, working 3 shifts per day (day/afternoon/night), and would include full- and part-time positions. During every 24-hour period, 7 days per week, there would be up to 40 trained wellness and care staff providing supportive living and general monitoring.



Project Summary

Site Area:
 Gross 2.92 AC
 Net* 1.85 AC
 *excludes easements, slopes, setbacks

Lot Coverage:
 Max. Allowed 60%
 Provided 44%

Overall Gross SF:
 Level 1 56,390 GSF
 Level 2 54,753 GSF
 Level 3 54,858 GSF
 TOTAL 166,001 GSF

Unit Mix:

AL	# of Units	Avg SF
Studio	16	
1 BR	52	
2 BR	34	
Total/Avg	102	827

MC	# of Units	Avg SF
Studio	22	
1 BR	8	
Total/Avg	30	476

	# of Units
Grand Total	132

Parking:

		REQUIRED				
Total Units = 132	City Code Sec. 9.25.020 Retirement Homes	OR	ITE 5th Edit. Code 254 Assisted Living	+	ADA Parking	= TOTAL Required
	88 spaces		53 spaces		7 spaces	
		PROVIDED				
Total Licensed Units = 132	Standard Parking	+	ADA Parking	=	TOTAL Provided	
	118 spaces		7 spaces		125 spaces	

Source(s): KTG (11-04-2019)



Figure 2-3

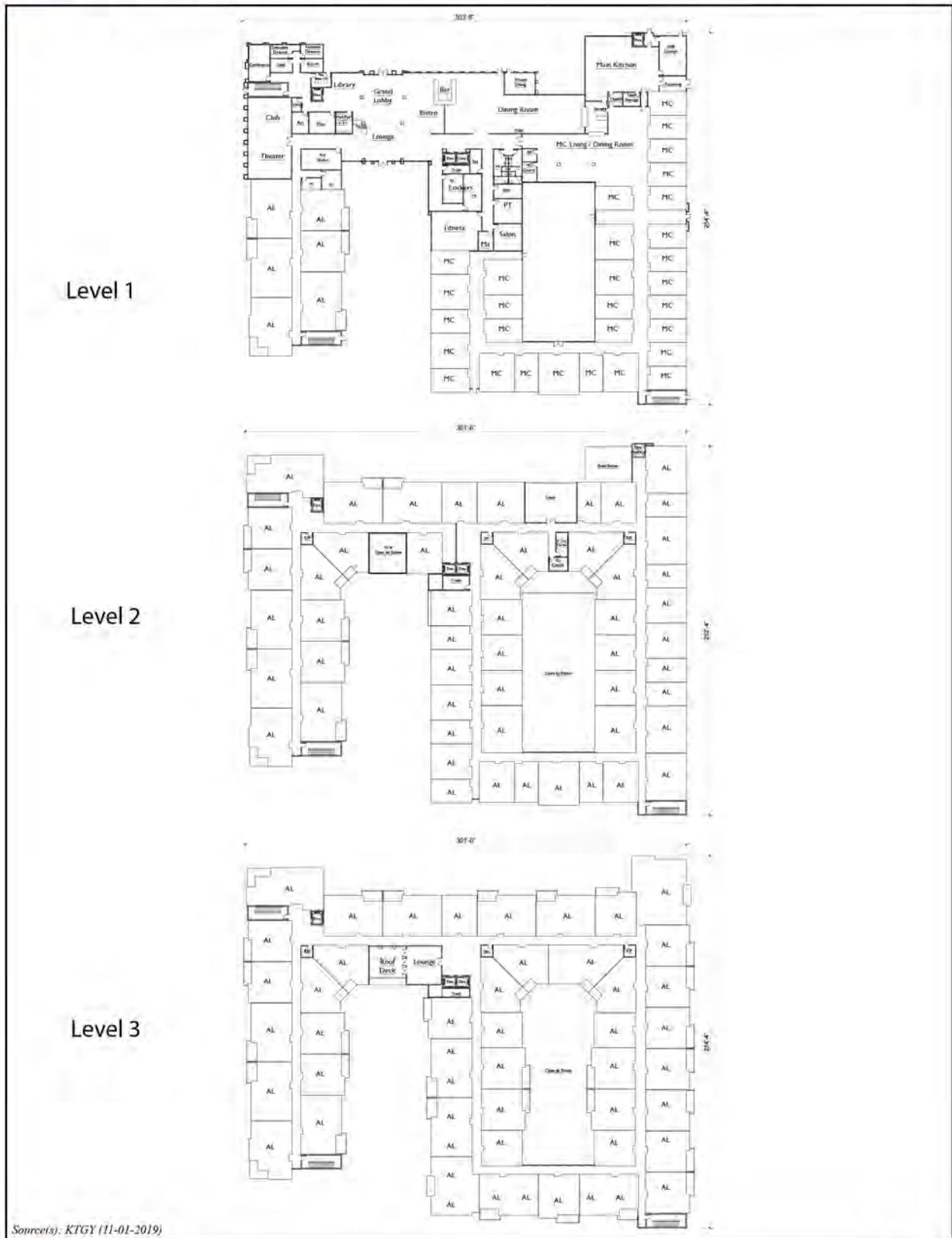
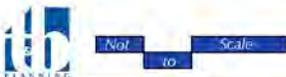


Figure 2-4



CONCEPTUAL BUILDING PLANS (LEVELS 1-3)



Figure 2-5a

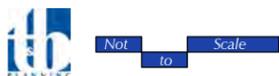
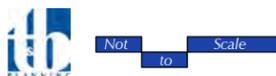
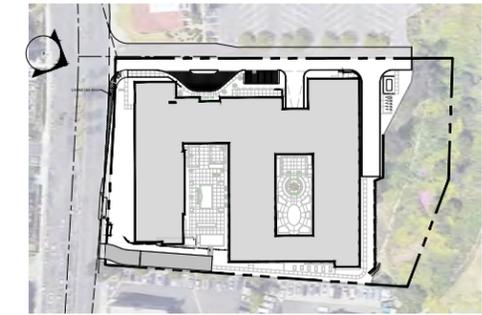




Figure 2-5b



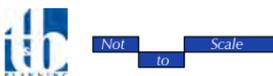


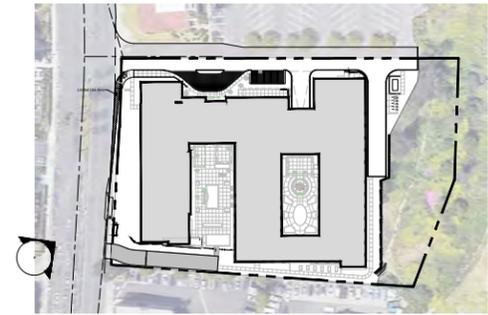
KEY PLAN (NTS)



Source(s): KTG (11-04-2019)

Figure 2-6a



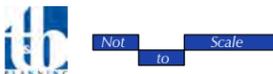


KEY PLAN (NTS)



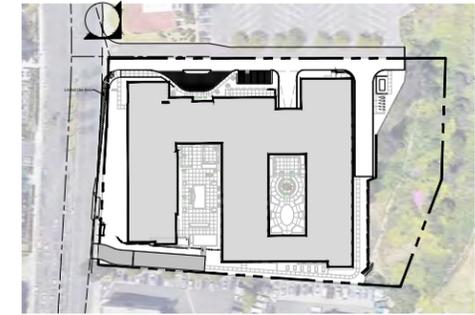
Source(s): KTG (11-04-2019)

Figure 2-6b





VIEW FROM PRIVATE DRIVE LOOKING DOWN RAMP TO PARKING GARAGE

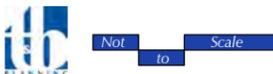


KEY PLAN (NTS)



Source(s): KTG (11-04-2019)

Figure 2-6c





2.3.2 Circulation and Parking

Vehicular Circulation

The existing shared driveway and drive aisle along the northern Project site boundary would provide the primary access to the Project site; however, the existing drive aisle would be removed and replaced with new asphalt. As shown on Figure 2-3, this drive aisle would provide access to the vehicular drop-off area at the north side of the building, to the subterranean parking facility, and to the kitchen service area.

The existing right-in and right-out driveway along Marguerite Parkway would be replaced with an emergency vehicle access drive along the southern boundary of the Project site. Emergency vehicle access would also be accommodated along the eastern portion of the Project site.

Non-Vehicular Circulation

Pedestrian connections to the sidewalks on Marguerite Parkway would be provided by walkways accessed from the main entrance of the building. Public pedestrian facilities along the Project frontage on Marguerite Parkway would be improved to comply with City standards, American with Disabilities Act (ADA) guidelines, and as required and approved by the City Engineer. The pedestrian connections would provide safe and efficient access to existing uses in the area, and to bus stops along Marguerite Parkway. An employee bicycle storage area is provided on the subterranean parking level (refer to Figure 2-7, Building Plan – Parking Level).

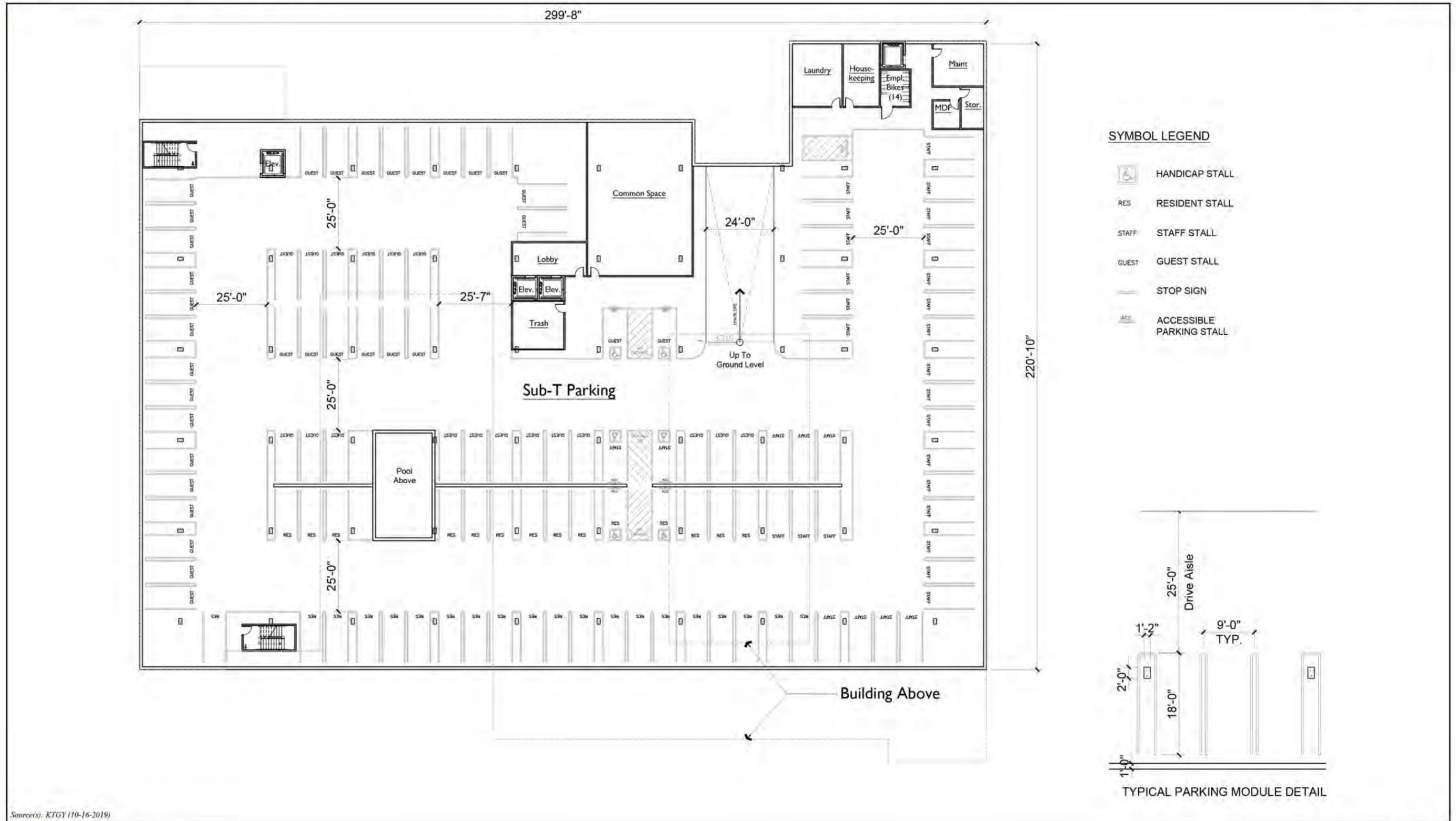
Parking

As shown on Figure 2-7, the Project includes a one-level subterranean parking facility with 121 parking spaces. Additionally, 4 surface parking spaces for guests would be provided next to the drop-off at the entrance of the building. The parking standards outlined in Section 9.25.020, Off-Street Parking, of the City of Mission Viejo Municipal Code, require a minimum of 88 parking spaces for the Project; therefore, the 125 spaces provided by the Project exceed the City's parking requirements. The parking provided includes the required 7 accessible spaces; 1 accessible guest stall would be provided at the entrance of the building.

2.3.3 Landscaping/Courtyards, Walls, and Lighting

Figure 2-8, Conceptual Landscape Plan, depicts the conceptual landscape plan for the Project, and the proposed courtyards and associated amenities. Approximately 46,560-sf of landscaping (20,201-sf on the building site [non-slope area] and 26,359-sf on the engineered slope) would be provided, representing approximately 37 percent of the Project site. The majority of the landscaped engineered slope in the eastern portion of the Project site would be retained and new planting would also be introduced onto this slope. Trees, shrubs, and groundcovers would be planted on-site along the southern, northern, and western perimeters of the building, including the setback area along Marguerite Parkway. Additionally, new street trees would be installed on the public parkway along Marguerite Parkway.

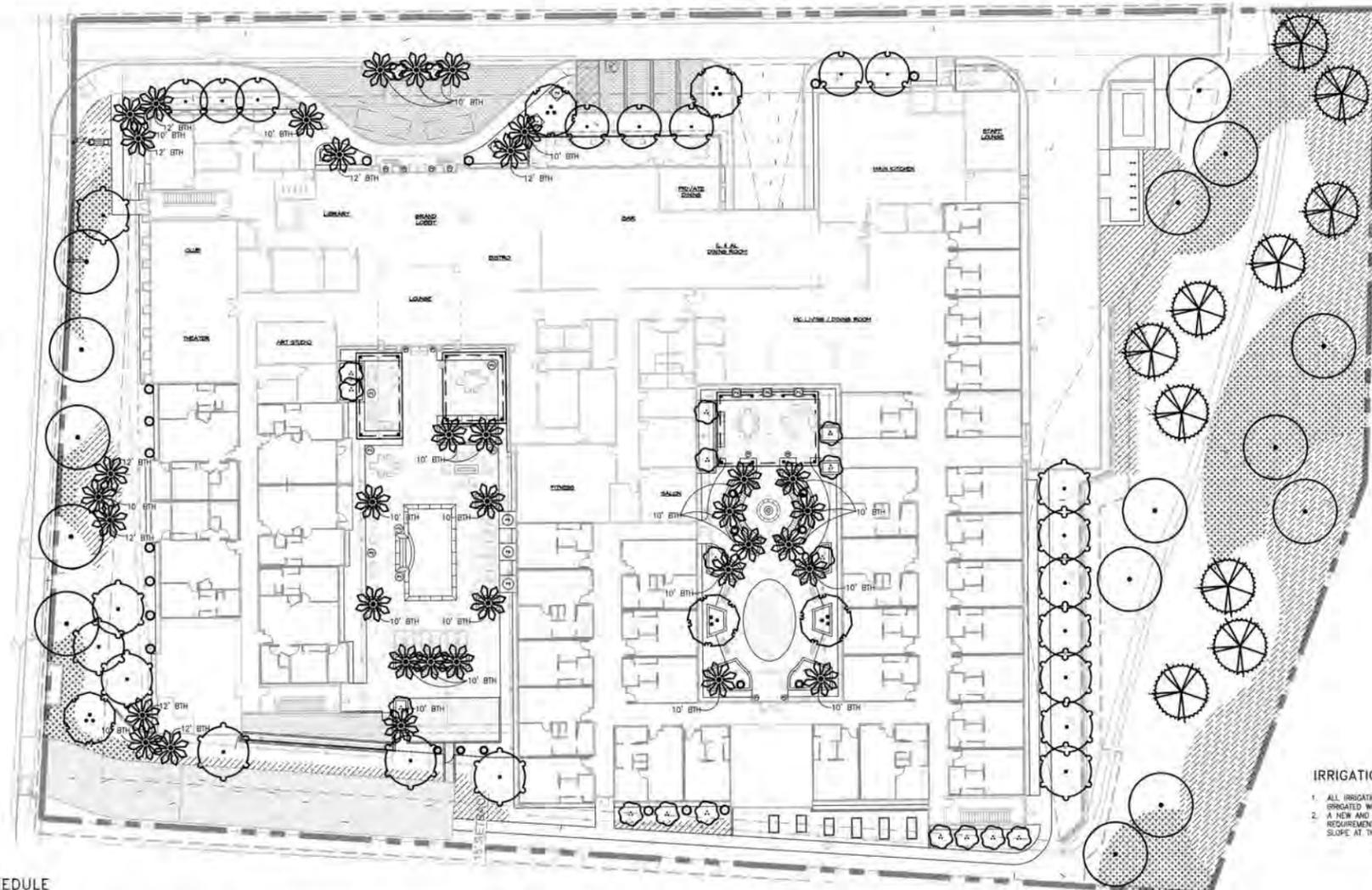
Two private courtyards would be provided at the ground level, in the central portion of the building. The eastern courtyard for MC residents would include a central water feature with a surrounding bench and seat wall, a putting green, dining area and barbeque, lounge area with a shade structure, walking paths and seating areas. The western courtyard for AL residents would include a pool, putting green, dog run, a fire pit with lounge seating, dining area and barbeque, and shaded outdoor lounge areas.



Source(s): KTG (10-16-2019)

Figure 2-7





PLANTING NOTES

1. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF SITE CONDITIONS WHICH PREVENT INSTALLATION PER PLANS AND SPECIFICATIONS.
2. CONTRACTOR SHALL BE LIABLE FOR REMOVING AND REINSTALLING IRRIGATION EQUIPMENT AND REPLANTING AREAS WHICH ARE NOT INSTALLED PER PLAN AND SPECIFICATIONS.
3. IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATING PRIOR TO INSTALLATION OF PLANT MATERIALS.
4. TREES AND SHRUBS SHALL BE PLANTED AFTER CONCRETE PLACEMENT, BUT NOT BEFORE IRRIGATION COVERAGE TEST NO. 1 HAS BEEN APPROVED. (SEE SPECIFICATIONS)
5. PLACE TREES BETWEEN IRRIGATION HEADS WHEREVER POSSIBLE.
6. MULCH INSTALLATION: INSTALL 3" SHREDED MULCH IN ALL TREE, SHRUB AND GROUNDCOVER AREAS PER SPECIFICATIONS, UNLESS OTHERWISE INDICATED ON PLANS.
7. CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS AND/OR REPLACEMENT OF ANY DAMAGED LANDSCAPE AREAS BEYOND THE LIMIT OF WORK THAT IS A DIRECT RESULT OF THE LANDSCAPE CONSTRUCTION AND/OR HIS SUB-CONTRACTOR. REPLACEMENT ITEMS SHALL BE EXACT DUPLICATE OF ORIGINAL WORK OR PLANS, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
8. CLEAN-UP SHALL TAKE PLACE ON A DAILY BASIS UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE.
9. CONTRACTOR SHALL INSTALL ROOT BARRIERS ON ALL TREES WITHIN 5'-0" OF STREET IMPROVEMENTS, CURBS, WALKS, CONCRETE, ASPHALT PAVING OR OTHER TYPES OF HARDSCAPE IMPROVEMENTS PER PLANS, DETAIL AND SPECIFICATIONS.
10. PLANT QUANTITIES ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR TO VERIFY ALL QUANTITY.
11. AT STAFF VEGETABLE GARDEN, VEGETABLES SUCH AS ARIZONA BEETS, BROCCOLI, CABBAGE, BRUSSELS SPROUTS, CARROTS, CAULIFLOWER, CELERY, ETC. CAN BE GROWN IN LITTLE SUN / SHADED AREAS. VEGETABLES TO BE SELECTED BY STAFF.
12. SOILS TEST TO BE TAKEN AFTER SITE IS RE-GRADED AND AMENDED TO VERIFY COMPATIBILITY OF ALL PLANT TYPES.

PLANTING SELECTION:

PER SUN STUDY (SEE SHEET A1.2) ALL PLANTING AREAS, EXCEPT THE MC COURTYARD, WILL RECEIVE SUFFICIENT SUN THROUGHOUT THE YEAR. THE PLANTING PALETTE SELECTED FOR THE MC COURTYARD IS APPROPRIATE FOR THE SUN/SHADE CONDITIONS.

IRRIGATION NOTES

1. ALL IRRIGATION TO BE SUPPLIED BY HIGHLY EFFICIENT, LOW WATER FLOW DRIPLINE. TREES TO BE IRRIGATED WITH LOW FLOW BUBBLERS.
2. A NEW AND COMPLETE IRRIGATION SYSTEM DESIGN WILL BE PROVIDED THAT MEETS ALL REQUIREMENTS OF ABBEY ORDINANCE. THIS IRRIGATION DESIGN WILL ALSO INCLUDE THE EXISTING SLOPE AT THE REAR OF THE PROPERTY.

TREE SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	SIZE	MULCH	QTY	REMARKS
	CHAMAEROPS HUMULIS	MEDITERRANEAN FAN PALM	8TH PER PLAN	LOW	2	MULTI-TRUNK
	CUPRESSUS SEMPERVIRENS 'MONSIEUR' TM	TINY TOWER ITALIAN CYPRESS	24"BOX	LOW	9	STANDARD
	CUPRESSUS SEMPERVIRENS 'STRICTA'	COLUMNAR ITALIAN CYPRESS	24"BOX	LOW	14	STANDARD
	JACARANDA MIMOSIFOLIA	JACARANDA	24"BOX	MED	14	STANDARD
	LAURUS NOBILIS	SWEET BAY	24"BOX	LOW	8	STANDARD
	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	DWARF SOUTHERN MAGNOLIA	24"BOX	MED	16	MULTI-TRUNK
	OLEA EUROPAEA 'MAJESTIC BEAUTY' TM	MAJESTIC BEAUTY FRUITLESS OLIVE	24"BOX	LOW	5	MULTI-TRUNK
	PHOENIX DACTYLIFERA 'MEDJOL'	DATE PALM	8TH PER PLAN	LOW	36	ACCENT PALM
	PIRUS ELDARICA	AFGHAN PINE	24"BOX	VERY LOW	10	STANDARD
	PLATANUS X ACERIFOLIA 'COLUMBIA'	LONDON PLANE TREE	24"BOX	MED	15	STANDARD

GROUND COVER SCHEDULE

GROUND COVERS	BOTANICAL NAME	COMMON NAME	SIZE	MULCH	SPACING	QTY	REMARKS
	ACACIA REDOLENS 'LOWBOY'	BANK CATCLAW	1 GAL	LOW	72" o.c.	157	TRI. SPACING
	CARISSA MACROCARPA 'GREEN CARPET'	GREEN CARPET NATAL PLUM	1 GAL	LOW	30" o.c.	1,083	TRI. SPACING
	LANTANA MONTEVIDEENSIS 'PURPLE'	TRAILING LANTANA	1 GAL	LOW	36" o.c.	342	TRI. SPACING
	ARTIFICIAL TURF - PUTTING GREEN FOREVERLAWN - TRUE PUT 10/11						
	ARTIFICIAL TURF - DOG PARK FOREVERLAWN - K9 GRASS						
	ARTIFICIAL TURF - EVA SYNTHETIC GRASS WAREHOUSE - DIAMOND SUPREME FESCUE						

Source(s): David Evans and Associates Inc.(11-04-2019)

Figure 2-8





The Project would include the installation of 18-inch high seatwalls, 6-foot high fences, and 48-inch high planter walls, as needed for seating, screening, and proper tree soil depth on structure.

Exterior lighting would be installed on-site, as necessary, for safety, security, and wayfinding. Decorative architectural lighting as well as landscape lighting would also be installed to accent building entries as focal points throughout the site.

2.3.4 Utility Infrastructure

Municipal and private utility services necessary to serve the Project are currently available in the roadways adjacent to the Project site. On-site utility infrastructure necessary to serve the Project—including water, sanitary sewer, drainage, water quality treatment, and dry utilities (e.g., electricity, natural gas, cable)—would be installed with the proposed development and would connect to the existing utility lines. No new or expanded utility lines or facilities are required off-site, except as needed for the utility connections. The final sizing and design of on-site facilities would occur during final design. The physical impacts that would result from installation of utility infrastructure are analyzed in this IS/MND. Existing and proposed utility infrastructure is described below.

- **Water.** Water service to the Project site is available through an existing 14-inch water line on the west side of Marguerite Parkway that is owned and maintained by the Moulton Niguel Water District (MNWD). An existing 8-inch water line services the site as well as the public fire hydrant on the south side of the southern driveway. This service line, which would serve the Project, splits into a 2-inch domestic service and a 6-inch fire service with detector check valve, post indicator valve and fire department connection for the building.
- **Sewer.** Sewer service to the project site is available through an existing 10-inch sewer line on the east side of Marguerite Parkway that is owned and maintained by MNWD. A 6-inch sewer lateral enters the site through the southern driveway, and would serve the Project.
- **Drainage and Water Quality Features.** The Project site currently drains from east to west, and stormwater from the Project site is intercepted in an existing 28-foot catch basin within Marguerite Parkway, which connects to an existing 48-inch storm drain line. As part of the Project, the existing catch basin would be relocated to the north to accommodate the proposed emergency access driveway at the southwest corner of the Project site. Off-site flows from the easterly slope are currently conveyed via an existing storm drain along the eastern and southern perimeter of the Project site. With the Project, this system would be conveyed through a new storm drain line along the north entrance driveway toward Marguerite Parkway and then conveyed south, where it would connect with the existing storm drain in Marguerite Parkway at the southern corner of the Project site. The flows for this system would not be modified, only the storm drain is being relocated.

Under the developed condition, the Project site would be divided into three drainage areas (A, B and C); Drainage Area C is part of Drainage Area A in the pre-Project condition. As shown on Figure 2-9, Conceptual Water Quality/Drainage Design, inlets in Drainage Area A would convey the runoff to subsurface detention basins that have been designed to meet the established hydromodification criteria. The subsurface detention basins would discharge the flow rates into a modular wetland system (a treatment control best management practice [BMP]) that would be used to filter the pollutants of concern associated with the Project runoff. Consistent with existing



MORNINGSTAR OF MISSION VIEJO

IN THE CITY OF MISSION VIEJO, COUNTY OF ORANGE, STATE OF CALIFORNIA



LEGEND:

- PROJECT/WATERSHED BOUNDARY
- PROPOSED STORM DRAIN
- ON-SITE SD INLETS W/STENCILING*
- BUILDING
- STREET FLOW DIRECTION
- LANDSCAPE
- UNTREATED AREA

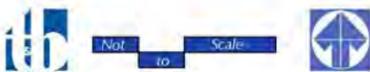
*THE GRADING AND DRAINAGE DESIGN IS CONCEPTUAL IN NATURE TO DEMONSTRATE THE DESIGN INTENT FOR THE PURPOSE OF OBTAINING PROJECT ENTITLEMENT. THE CONCEPTUAL DESIGN IS SUBJECT TO CHANGE AND DESIGN DETAILS WILL BE PROVIDED DURING FINAL ENGINEERING ONCE PROJECT CONDITIONS HAVE BEEN PROVIDED.

*THE PROJECT WILL UTILIZE MODULAR WETLANDS SYSTEM AND UNDERGROUND DETENTION FOR WATER QUALITY AND HYDROMODIFICATION MITIGATION.

*SOURCE CONTROL BMPs WILL BE IDENTIFIED DURING FINAL ENGINEERING

Source(s): LC Engineering & Consulting, Inc. (08-05-2019)

Figure 2-9





condition, runoff from Drainage Area B would discharge to the catch basin along Marguerite Parkway, which would be relocated to the north.

Drainage Area C includes the proposed emergency access driveway, which would be comprised of landscaping and a turf block with grass. This area would discharge into Marguerite Parkway and would be self-treating.

As shown on Figure 2-9, the Project would utilize three subsurface vaults (two which would act as one unit with an equalization pipe) to address hydromodifications; the vaults and associated modular wetland systems would be located along the western and southern landscaped areas of the Project site. Subsurface Vault A would be 10 feet deep, with a minimum surface area of 3,249 sf, providing a total of 32,844 cubic feet (cf) of storage. Subsurface Vault B would have the same total dimensions as Subsurface Vault A; however, Vault B would be a series of two vaults (due to lack of space for one larger vault) that would incorporate that same total surface area (3,249 sf) between the two vaults. The two vaults would be connected by an equalization pipe at the bottom of the vaults. Flows from the vaults would be metered out slowly to reduce the flow rates to the pre-developed flow rates. The Project also incorporates Low Impact Development (LID) BMPs (landscaping and subterranean parking to minimize impervious parking area) and source control BMPs (including but not limited to: BMP maintenance, drainage facility inspection, storm drain system signs, efficient irrigation, and trash enclosures) to minimize, prevent, and/or otherwise appropriately treat storm water runoff flows before they are discharged from the Project site.

- **Electric, Natural Gas and Telecommunications.** San Diego Gas & Electric (SDG&E) provides electricity to the existing Project site and would serve the Project via a 12 kilovolt (kV) underground service that runs along the northern side of the Project site within the access easement. There is an existing electric transformer in the eastern parking lot that would be relocated to the northeast corner of the Project site, adjacent to the proposed emergency generator that would be located east of the service driveway. A block wall and landscaping would screen the generator. Southern California Gas Company (SCG) provides natural gas to the Project site and has a 12-inch high pressure gas line and a 6-inch gas line on the east side of Marguerite Parkway. A 2-inch gas line fed from the 6-inch line in Marguerite Parkway is also located within the access easement along the northern side of the Project site and feeds three existing gas meters; this 2-inch gas line would also serve the Project. Telephone, cable television, and internet services are provided by Cox Business. Service connections for the Project would be made from existing utility lines on Marguerite Parkway, with new lines placed underground.

2.4 Construction Activities

The Project is anticipated to be under construction from June 2020, when demolition of the existing building and parking areas would be initiated, until December 2021 (approximately 18 months). The duration for each stage of construction is estimated in Table 2-1. The number and types of equipment to be used would vary on a daily basis based on the stage of construction; however, typical construction equipment would be used (e.g., concrete/industrial saws, dozers, tractors/loaders/backhoes, graders, excavators, cranes, forklifts, welders, cement and mortar mixers, pavers and paving equipment, rollers, and, air compressors).



Table 2-1 Construction Duration

Phase Name	Start Date	End Date	Days
Demolition	06/01/2020	06/26/2020	20
Site Preparation	06/27/2020	07/24/2020	20
Grading	07/25/2020	09/25/2020	45
Building Construction	09/26/2020	09/24/2021	260
Paving	08/01/2021	09/10/2021	30
Architectural Coating	09/09/2021	12/01/2021	60

The preliminary grading plan for the Project is presented in Figure 2-10. The Project would require excavation to accommodate the subterranean parking level; there would be approximately 30,990 cy of cut and 1,520 cy of fill with an associated export of approximately 29,470 cy. It is expected that there would be approximately 25 days of hauling soil from the Project site. The depth of excavation is anticipated to extend up to 20 feet bgs.

The entirety of the previously developed area within the Project site would be disturbed during construction of the Project. The engineered slope in the eastern portion of the Project site would largely be left in its current condition; however, a soldier pile retaining wall (up to 19-feet high) would be installed near the base of the slope. Additionally, off-site areas adjacent to the Project site would be physically disturbed for roadway improvements and installation of utility infrastructure. The off-site impact areas are also shown on Figure 2-10.

As shown on Figure 2-11, Construction Logistics, construction staging and laydown areas would occur within the Project site; however, temporary construction parking would occur off-site on a portion of the parking lot north of eastern portion of the Project site. Temporary storage of materials may also occur in the adjacent parking lot and this area would be properly fenced and secured. The Project site would be fenced during construction and access for construction vehicles would be provided by the existing driveway along Marguerite Parkway.

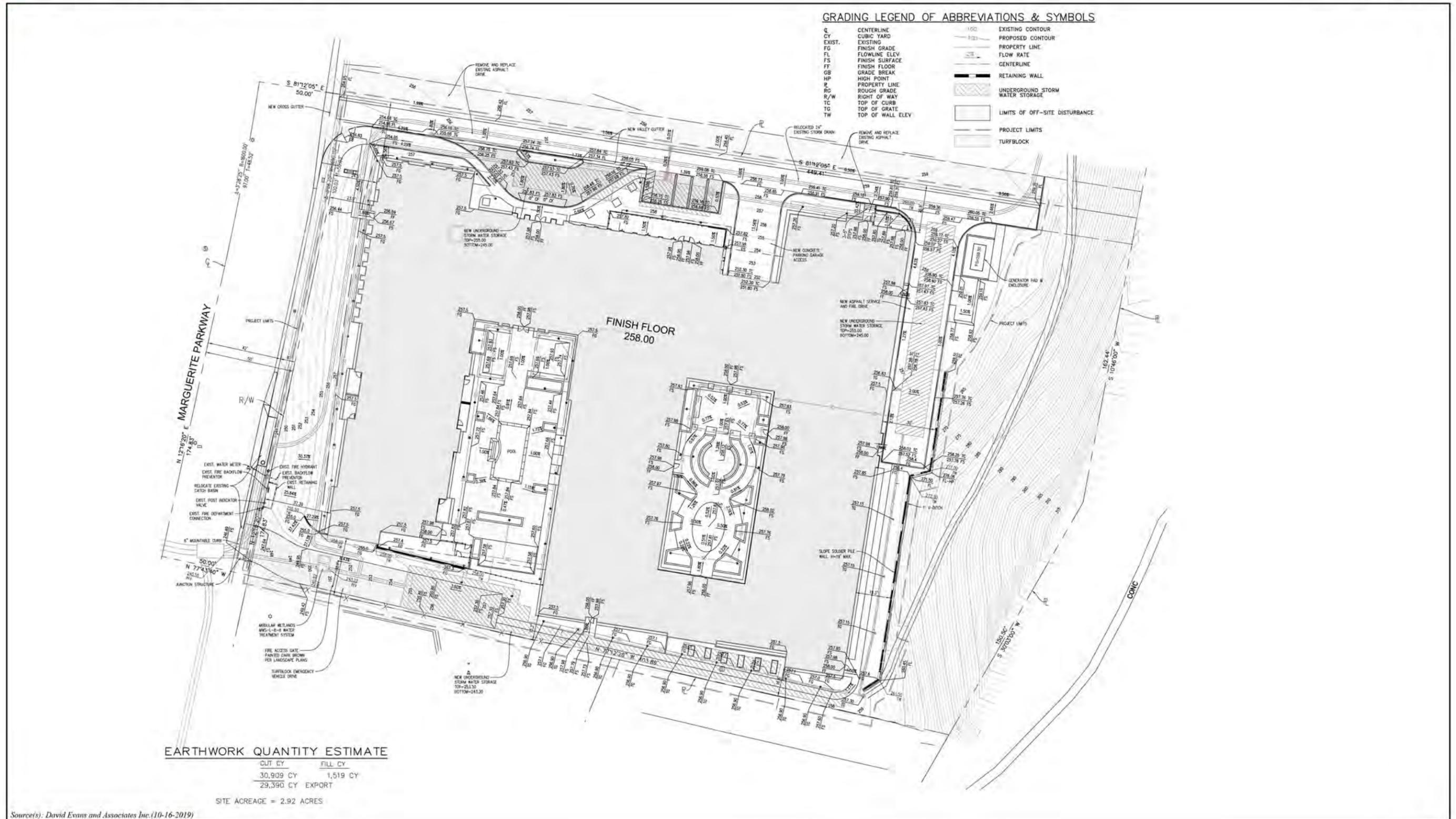
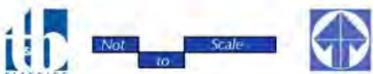
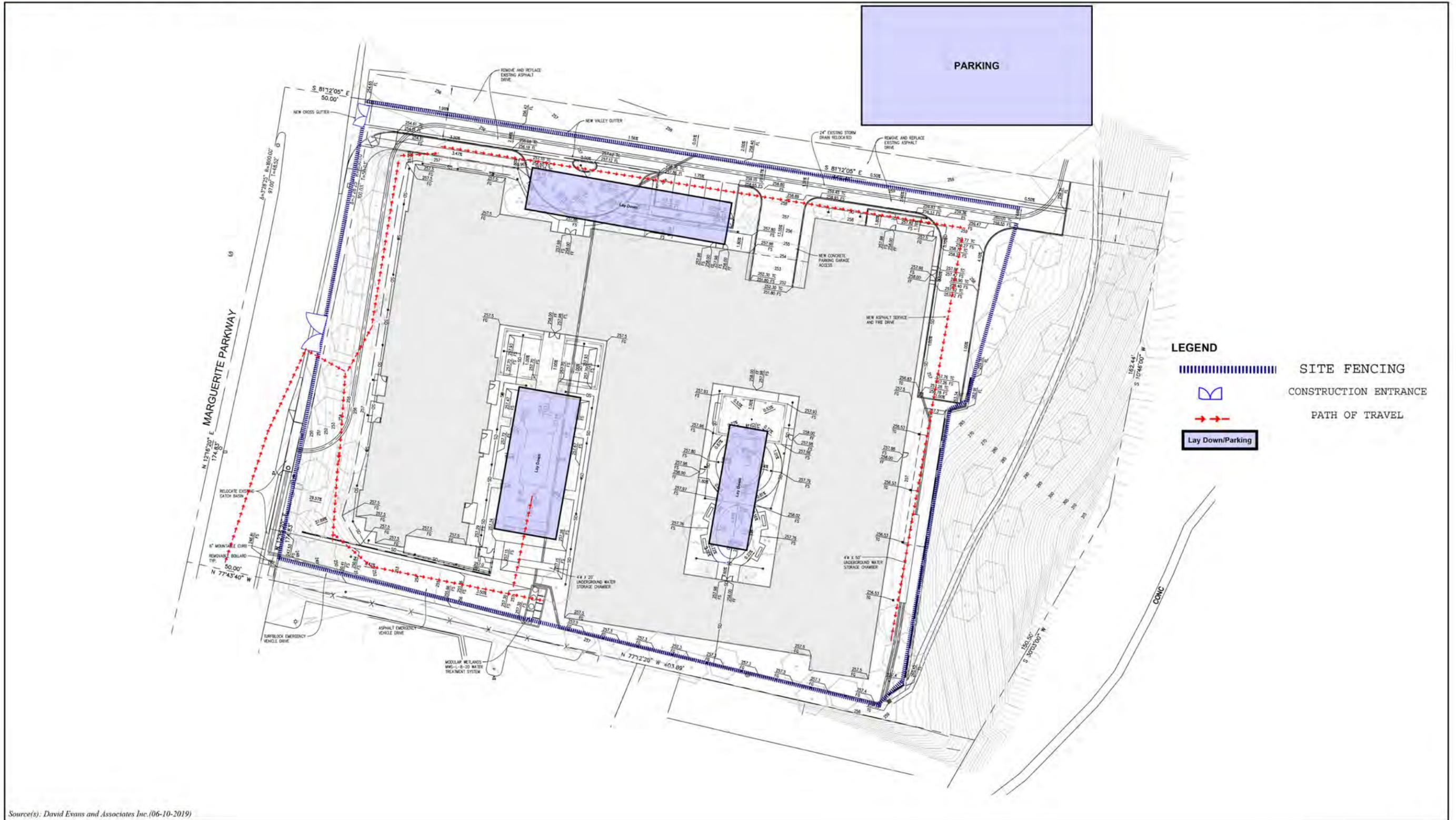


Figure 2-10





Source(s): David Evans and Associates Inc. (06-10-2019)

Figure 2-11





2.5 Discretionary Approvals

This IS/MND has been prepared to retain the approvals and permits needed for construction and operation of the Project, whether or not such actions are known or are explicitly listed. Anticipated approvals required from the City of Mission Viejo and the responsible agencies to implement the Project include, but are not limited to, those listed in Table 2-2, Anticipated Discretionary Actions/Approvals.

Table 2-2 Anticipated Discretionary Actions/Approvals

Lead Agency	Action
City of Mission Viejo	Adoption of the Mitigated Negative Declaration
	Zone Change (ZC2019-22) involving a Zoning Map Amendment to place a Senior Housing Overlay Zone on the Project site’s current Commercial Highway zone to permit the proposed congregate care/assisted living use.
	Planned Development Permit (PDP2019-309) for the proposed use.
	Variance (VAR2019-53) to allow for an exceedance of the 35-foot maximum building height limit.
Responsible Agencies	Action
South Coast Air Quality Management District	Permits to construct and/or permits to operate new stationary sources of equipment that emit or control air contaminants (e.g., heating, ventilation, and air conditioning units).
Moulton Niguel Water District	Approval of water and sewer improvement plans.

Subsequent non-discretionary approvals (which would require separate processing through the City of Mission Viejo) would include, but may not be limited to, a demolition permit, a grading permit, building permits, and a street encroachment permit.



3.0 Environmental Checklist and Evaluation

3.1 Project Information

1. Project Title

MorningStar of Mission Viejo Senior Living Project

2. Lead Agency Name and Address

City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

3. Contact Person and Phone Number

Nick Lagura, AICP
Associate Planner, Community Development Department
nlagura@cityofmissionviejo.org
(949) 470-3074

4. Project Location

The approximately 2.92- acre Project site is located at 28570 Marguerite Parkway, Mission Viejo, CA 92692

5. Project Applicant

Confluent Development (CDP-MS Marguerite, LLC)
2240 Blake Street, Suite 200
Denver, CO 80205

Contact: H McNeish
hmcneish@confluentdevelopment.com

6. General Plan Designation

Commercial Highway

7. Zoning

CH (Commercial Highway)

8. Description of Project:

Please refer to Section 2.0 for a detailed description of the Project. In summary, the Project involves the redevelopment the Project site with a three-level, approximately 166,000 sf congregate care/senior living community, and one level of subterranean parking. Up to 132 units would be provided for Assisted Living (102 units), and Memory Care (30 units). The existing 2-story, 38,600 sf mixed-use commercial/retail building, and associated surface parking areas would be demolished. Access to the Project site would be



provided from the existing driveway at the northern property boundary and the existing shared access drive; an emergency access driveway would be provided at the southern property boundary. The existing engineered slope in the eastern portion of the Project site, which ascends to the Saddleback College campus, would be retained and additional landscaping would be installed.

As identified in Table 2-2, Anticipated Discretionary Actions/Approvals, the Project would require the following approval from the City of Mission Viejo: a Zone Change consisting of a Zoning Map Amendment to place a Senior Housing Overlay Zone on the Project site's current Commercial Highway zone; a Planned Development Permit for the proposed use; and a variance to allow for exceedance of the maximum building height limit.

9. Surrounding Land Uses and Setting:

As previously discussed in Section 2.2, Environmental Setting, the Project site is surrounded by existing restaurant and commercial uses to the north; commercial and office uses to the west, across Marguerite Parkway; Saddleback College to the east; and commercial uses to the south, north of Avery Parkway. There are commercial and residential uses further to the south, across Avery Parkway. Access to the Project site is currently provided from two driveways off Marguerite Parkway, and a shared access drive north of the Project site.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

South Coast Air Quality Management District and MNWD (refer to Table 2-2, Anticipated Discretionary Actions/Approvals).

11. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources 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.? *Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.*

On September 19, 2019, the City of Mission Viejo provided notice of the Project to 10 Native American Tribes: Juaneño Band of Mission Indians Acjachemen Nation, Soboba Band of Luiseno Indians, Agua Caliente Band of Cahuilla Indians, Juaneño Band of Mission Indians, Pechanga Band of Luiseno Indians, Rincon Band of Luiseno Indians, La Jolla Band of Luiseno Indians, Soboba Band of Luiseno Indians, Pechanga Band of Luiseno Indians, San Luis Rey Band of Mission Indians. The 30-day request for consultation period concluded October 19, 2019. None of the contacted tribes requested consultation. Refer to IS/MND Section 3.4.18, Tribal Cultural Resources, for more information regarding the Project's AB 52 consultation process.



3.2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that would require mitigation, as indicated by the checklist on the following pages.

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

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

Signature 

Date 11-7-19

Nick Lagura, AICP, Associate Planner

City of Mission Viejo
For



3.4 Evaluation of Environmental Impacts

This section contains the Environmental Checklist for the Project and is based on the Initial Study Environmental Checklist (Checklist) included in Appendix G of the CEQA Guidelines, approved in December 2018. The Checklist is marked with findings as to the environmental effects of the Project. The evaluation of environmental impacts in this section has been undertaken, pursuant to the provisions of CEQA, to provide the City of Mission Viejo with the factual basis for determining, based on the information available, the form of environmental documentation the Project warrants. The basis for each of the findings is provided in the explanation of responses following the Checklist. References used to support the analyses are identified in the text and listed in Section 5.0 of this IS/MND.

3.4.1 Aesthetics

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

a) *Would the Project have a substantial adverse effect on a scenic vista?*

Less than Significant Impact. The Conservation/Open Space Element of the City’s General Plan includes Policy 3.7 to address the conservation of views of scenic value (City of Mission Viejo, 2013a).

Policy 3.7 Preserve views of significant value along streets and highways that adjoin such areas as a lake, hillside, ridgeline, creek, open space, or recreational area.

As shown in the site photographs included in Figure 3-1, Figure 3-2, and Figure 3-3, the Project site includes a two-story commercial/retail building and associated parking lot, and is within an urbanized area predominately developed with commercial uses. While there are background views of hillsides in Laguna Niguel and San Juan Capistrano from vantage points at higher elevations surrounding the Project site, there are no scenic views of significant value in the immediate vicinity of the Project site. There is an engineered slope to the east, that includes the eastern portion of the Project site. This slope ascends approximately 81-feet from the parking lot at the Project site up to the Saddleback College campus. It also



extends along the eastern and northern perimeter of the commercial uses north of the Project site and is a prominent visual feature. The existing two-level structure on the Project site obstructs views of the portion of the slope on the Project site, and the views of off-site portions of this hillside from Marguerite Parkway and vantage points in the vicinity of the Project site have been substantially altered with the introduction of the retaining wall at the top of the slope associated with the Saddleback College athletic facility improvements.

As shown on Figure 2-8, Conceptual Landscape Plan, the proposed three-level building would cover the majority of the developed portion of the Project site and there would be a landscaped setback from Marguerite Parkway (average of 28-feet). Distant hillside views from elevated vantage points near the Project site, including from College Drive West (along the western perimeter of the Saddleback College campus), from Avery Parkway (traveling west on the roadway), and from Marguerite Parkway would not be significantly affected as the height of the building would not extend above the engineered slope east of the Project site, and views along Marguerite Parkway corridor would be maintained with the proposed setback. The Project would not have a substantial adverse effect on scenic vistas, and a less than significant impact would occur. No mitigation is 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. The Project is not within a State scenic highway. The California Department of Transportation (Caltrans) Landscape Architecture Program administers the Scenic Highway Program, contained in the Streets and Highway Code, Sections 260–263. Scenic highways are classified as either Officially Listed or Eligible. There are no Officially Listed or Eligible state-designated scenic highways in Mission Viejo (Caltrans, 2019). The nearest Eligible State scenic highway is State Route (SR)-74 located approximately three miles southeast of the Project site and there are no views of the Project site from SR-74. As such, the Project would not impact scenic resources within a State designated scenic highway. No impact would result and no mitigation is required.

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

No Impact. The Project is in an urbanized area with commercial uses adjacent to the Project site to the north, east and south. The site photographs presented in Figure 3-1, Figure 3-2, and Figure 3-3 demonstrate the visual character of the Project site and surrounding areas. As shown in the site photographs, the western portion of the Project site is developed with a multi-tenant commercial/retail building and an associated surface parking lot; there is an engineered slope along the eastern portion of the Project site. There is a limited number of trees and ornamental landscaping within the Project site; eucalyptus trees are planted on the engineered slope in the eastern portion of the Project site.

The primary public views of the Project site are from vantage points along Marguerite Parkway (refer to Figure 3-1 and Figure 3-3). Views of the Project site from vantage points along Avery Parkway are largely obstructed by the existing slope (refer to View 4 in Figure 3-2), and existing development fronting Avery Parkway. Saddleback College is elevated above the Project site and views from the western perimeter of



VIEW 1



VIEW 2

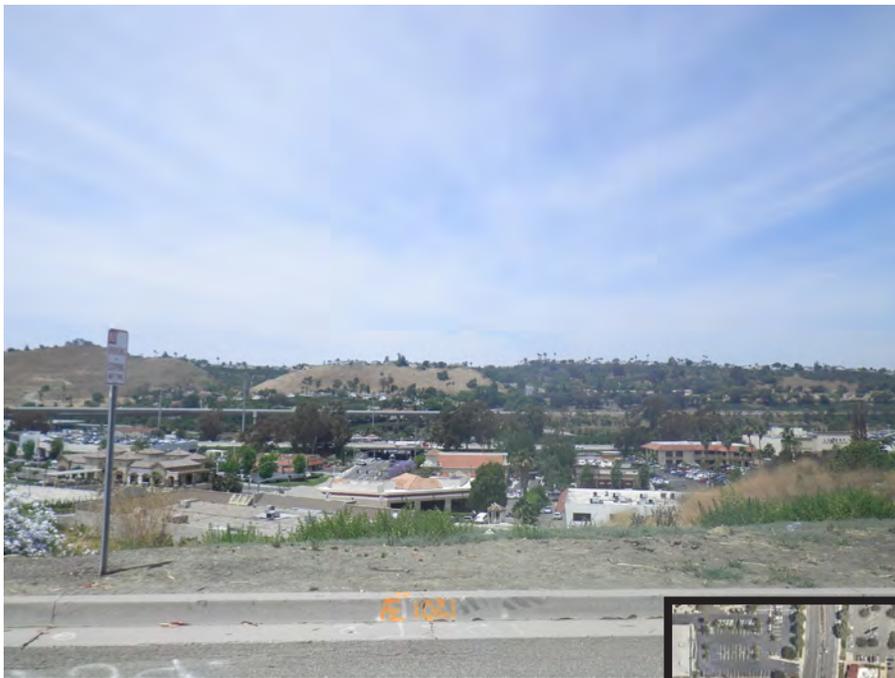


Figure 3-1



Not to Scale

SITE PHOTO SET 1



VIEW 3

KEY MAP



VIEW 4

Figure 3-2



Not to Scale

SITE PHOTO SET 2



VIEW 5

KEY MAP



VIEW 6



Figure 3-3



Not to Scale

SITE PHOTO SET 3



the campus overlooks the Project site and surrounding development; the focus of the views are the hillsides in the background (refer to View 3 in in Figure 3-2).

Given the urban nature of the Project site and surrounding areas, the analysis for this threshold is appropriately based on review of the potential for the Project to conflict with applicable zoning and other regulations governing scenic quality. Specifically, regulations governing scenic quality are establish through the City’s Municipal Code and General Plan, as discussed below.

City of Mission Viejo Municipal Code

The purpose of Title 9, Land Use/Zoning/Subdivision Regulations, of the City of Mission Viejo Municipal Code, is to “promote the public health, safety, general welfare and to preserve and enhance the aesthetic quality of the City by providing regulations to ensure an appropriate mix of land uses and orderly land development”. The Project site is zoned CH (Commercial Highway). As previously discussed in Section 2.0, specialized housing designed to meet the physical and social needs of senior citizens is allowed in the CH zone provided the property is situated in a Senior Housing (SH) Overlay Zone and subject to a Planned Development Permit. Chapter 9.11 of the Municipal Code outlines permitted uses and development standards for commercial/office zones, including the Senior Housing Overlay Zone. Table 3-1 addresses the Project’s consistency with applicable development standards outlined in Section 9.11.020 (a) of the Municipal Code.

Table 3-1 Zoning Development Standards Consistency Analysis

Applicable Development Standard	Project Consistency
Commercial Highway Zone General Standards	
Minimum Lot Area: 15,000 sf	Consistent. The Project site is approximately 2.92 acres (approximately 127,195 sf), which is substantially larger than the required minimum lot area of 15,000 sf. Therefore, the Project would be consistent with the minimum lot requirement.
Maximum Floor Area Ratio (FAR): 1.5	Consistent. The Project site has a FAR of approximately 1.31, which not exceed the required maximum lot FAR of 1.5. Therefore, the Project would be consistent with the maximum lot FAR requirement.
Minimum Front Setback: 20 feet	Consistent. As shown on Figure 2-3, Conceptual Site Plan, there would be an average 28-foot front setback from Marguerite Parkway; there is no location where the setback would be less than the minimum 20-foot front setback requirement. Therefore, the Project would be consistent with the minimum front setback requirement.
Minimum Rear Setback: 25 feet	Consistent. As shown on Figure 2-3, the rear property line extends into the adjacent engineered slope. The proposed building would be set back more than 25 feet from the rear property line (approximately 63-feet). Therefore, the Project would be consistent with the minimum rear setback requirement.
Minimum Side Setback: 15 feet	Consistent. As shown on Figure 2-3, the side setback would be a minimum of 15 feet on the south side of the proposed building, and 25 feet on the north side of the



Applicable Development Standard	Project Consistency
	proposed building, consistent with the minimum side setback requirement. Therefore, the Project would be consistent with the minimum side setback requirement.
Minimum Side Setback – Side Street: 20 feet	Consistent. As shown on Figure 2-3, the side setback from the access drive along the northern Project site boundary would be 27 feet, which exceeds the 20-foot minimum side setback requirement. Therefore, the Project would be consistent with the minimum side setback – side street requirement.
Maximum Parcel Coverage: 60 percent	Consistent. The Project site is approximately 2.9 gross acres. The proposed building footprint is approximately 56,390 gsf, resulting in a lot overage of approximately 44 percent, which is less than the maximum structural parcel coverage requirement of 60 percent. Therefore, the Project would be consistent with the maximum allowed parcel coverage.
Maximum Structure Height: 35 feet or three stories, whichever is less, unless modified by the commission	Consistent with Variance. Consistent with this requirement, the Project involves development of a three-story building. As shown on the building elevations included in Figure 2-5, the horizontal parapet portions of the roof on the building sit below the maximum 35-foot height limit except for the southeast corner, which rises to 38-feet to create interest in that portion of the building. Additionally, the sloped portions of the roof range from 37-feet to 38-feet to allow for variations in the aesthetics, thereby eliminating the “sameness” and “flat” appearance that would come from maintaining a 35-foot limit across the entire project. There is a distinct Spanish-style chimney element in northwest corner of the building that rises to 41-feet. Additionally, in the southwest corner of the building, the adjacent finished grade is retained by a wall to accommodate the emergency vehicle access drive from Marguerite Parkway. The result in this single location (one side of one corner of the building) is a building height of 40-feet from finished grade to the highest nearby building peak. It is 35-feet from that finished grade to the highest structure at the building corner.. However, the Project Applicant has requested a variance to allow for the exceedance of the maximum building height limit.
Commercial Zone Standards	
All uses shall be conducted within a completely enclosed structure. Limited outside uses (i.e., patio dining areas, garden sales and other uses deemed acceptable) may be approved with a planned development permit.	Consistent. As shown on Figure 2-3, the proposed uses would be within the structure. There would be outside uses, including courtyards and other amenities, that would be screened from most viewshed by the proposed structure. Additionally, a Planned Development Permit is required for the Project.
There shall be no visible storage of motor vehicles, trailers, airplanes, boats, or their composite parts;	Consistent. The Project does not involve the storage of vehicles or materials, except during construction. As



Applicable Development Standard	Project Consistency
<p>loose rubbish, garbage, junk, or their receptacles; tents; equipment; or building materials in any portion of a parcel. No storage shall occur on any vacant parcel. Building materials for use on the same premises may be stored on the parcel during the time that a valid building permit is in effect for construction.</p>	<p>previously discussed in Section 2.4, Construction Activities, construction staging and building material storage would occur onsite or in the adjacent parking area. The Project site and storage areas would be fenced during construction.</p>
<p>Every parcel with a structure shall have a trash receptacle(s) on the premises. The trash receptacle(s) shall be of sufficient number and size to accommodate the trash generated. The receptacle(s) shall be screened from public view on at least three sides by a solid wall seven feet in height and on the fourth side by a solid metal gate not less than six feet in height. The gate shall be maintained in good working order and shall remain closed except when in use. The wall and gate shall be architecturally compatible with the surrounding structures.</p>	<p>Consistent. As shown on Figure 2-7, required trash receptacles would be located in the subterranean parking level and would not be visible to the public.</p>
<p>All roof-mounted air conditioning or heating equipment, vents or ducts shall not be visible from any abutting parcel, or any public street or right-of-way. This shall be accomplished through the extension of the main structure or roof or screened in a manner which is architecturally integrated with the main structure(s).</p>	<p>Consistent. Roof-mounted mechanical equipment would be in the central and eastern area of the northern portion of the roof, set back from the roof edge. The equipment would not be visible as it would be screened by roof features.</p>
<p>Internal or external bars, grates, or other safety devices of similar nature shall not be placed on or adjacent to door or windows unless expressly authorized by the director of community development.</p> <p>All elevations of all structures shall be architecturally treated to ensure compatibility with all neighboring structures and the established character of the city.</p>	<p>Consistent. The Project does not include external safety devices. As shown in the building elevations and conceptual rendering provided in Figure 2-5 and Figure 2-6, respectively, the proposed three-level building has been designed to be visually compatible with similar architectural elements of Andalusian and Spanish traditional influences that are prevalent in Mission Viejo.</p>

Section 9.27 of the City’s Municipal Code includes landscaping standards. Among other purposes, these standards are intended to “Enhance the aesthetic appearance of development in all areas of the City by providing standards relating to quality, quantity and functional aspects of landscaping and landscape screening.” Section 9.27.015(e) establishes a requirement for 15 percent of the net site area be landscaped. The Project includes 46,560-sf of landscaping (26,359-sf on the engineered slope and 20,201 on the building site [non-slope area]), representing approximately 37 percent of the Project site, exceeding the City’s landscape requirements. Further Section 9.27.025 of the City’s Municipal Code addresses landscape plans for setback and parkway treatment standards. As shown in Figure 2-8, the Project includes an average 28-foot setback from Marguerite Parkway, which would be landscaped with various tree species; shrubs and groundcover would also be planted. The Project drop-off area and southern perimeter of the Project site, which are adjacent to existing commercial uses would also be landscaped. The drop-off area and guest parking at the Project entrance would have enhanced paving. An approximately 19-foot high retaining wall would be installed near the base of the eastern slope; trees would be planted to visually screen the wall and additional trees would be planted on the slope. The proposed landscaping would enhance the aesthetic character of the Project, consistent with the purpose of the landscape standards established by the City. Notably, the landscaping proposed along Marguerite



Parkway would enhance this streetscape compared to existing conditions, as demonstrated in the site photographs.

City of Mission Viejo General Plan

As previously discussed, the Project site currently has a General Plan land use designation of Commercial Highway, and specialized housing designed to meet the physical and social needs of senior citizens is allowed in Commercial Highway-designated areas, provided the property is located within a Senior Housing Overlay Zone. The Project includes placing a Senior Housing Overlay Zone on the Project and a General Plan Amendment is not required. Relative to scenic quality, in addition to Policy 3.7 of the General Plan Conservation/Open Space Element discussed under Threshold a, above, which addresses scenic views, the General Plan Land Use Element includes goals and policies related to community identity and urban design. The Project’s consistency with applicable goals and policies is analyzed in Table 3-2, General Plan Consistency Analysis – Community Identify and Urban Design.

Table 3-2 General Plan Consistency Analysis – Community Identify and Urban Design

Goals and Policies	Proposed Project Consistency
<p>Goal 3: Maintain community identity and development quality for the City and its neighborhoods.</p> <p>Policy 3.2: Ensure that new development and land uses are architecturally consistent and compatible in scale and style with existing development and identified standards for the various districts within the City.</p> <p>Policy 3.3: Ensure that infill development is compatible with community open space areas and existing community character.</p> <p>Policy 3.5: Emphasize quality of design for new development and rehabilitation of existing development, including the preservation and increase of arterial landscape space.</p>	<p>Consistent. The Project would replace an existing two-level structure that is set back from Marguerite Parkway. Surface parking and limited landscaping currently define the streetscape along Marguerite Parkway at the Project site. As shown in the building elevations and conceptual rendering provided in Figure 2-5 and Figure 2-6, respectively, the proposed three-level building has been designed to be visually compatible with similar architectural elements of Andalusian and Spanish traditional influences that are prevalent in Mission Viejo. The building materials would consist primarily of stucco with stone, wood, decorative tile, and tile roof enhancements. Wood balconies and metal railings would also be provided. The provision of one-level of underground parking ensures that surface parking is not a focal point of the Project’s visual character.</p> <p>As identified through the analysis presented in Table 3-1, the Project would not conflict with applicable development standards, with the exception of the maximum height limit of 35-feet for which a variance is being requested. The exceedance of the height limit is requested to allow for architectural design features that add visual interest to the building. The three-level building would not conflict with the scale and massing of existing one- to three-level buildings along the Marguerite Parkway corridor in the vicinity of the Project site.</p> <p>As shown on Figure 2-8 and discussed above, the Project would include landscaping consisting of trees,</p>



Goals and Policies	Proposed Project Consistency
	shrubs and groundcover throughout Project site and notably along Marguerite Parkway, enhancing the streetscape in this area. The Project site is not in the vicinity of a community open space area. The Project would be consistent with Policy 3.2, 3.3 and 3.5.

The proposed congregate care/senior housing use is allowed in the CH zone, within a Senior Housing Overlay Zone, and subject to a Planned Development Permit. Pursuant to Chapter 9.47 of the City’s Municipal Code, the Planned Development Permit procedure is intended to protect the integrity and character of the residential, commercial, and industrial areas of the City. The Planned Development Permit process involves review of the location, design, configuration, and impact of the proposed use be conducted by comparing the use to established standards and design guidelines.

As discussed above, the City has established development standards and landscape requirements in the Municipal Code, and provides goals and policies in the General Plan Land Use Element to protect the visual and scenic quality of the City. As demonstrated through the analysis presented above, the Project would not conflict with applicable development standards in the City’s Municipal Code established for the Commercial Highway zone (with the exception of the maximum height limit of 35-feet), would comply with established landscaped requirements, and would not conflict with applicable community identity and urban design goals and policies. The exceedance of the height limits ranges from 3- to 10-feet, and is requested to provide architectural design elements that would add visual interest to the proposed structure.

As allowed by Chapter 9.46 of the City’s Municipal Code, the Project Applicant is requesting a variance for the exceedance of the height limit and the City would be required to make appropriate findings prior to approval of this variance. The exceedance of the height limit would not result in adverse visual effects and would not result in physical environmental impacts related to aesthetics.

This impact would be less than significant, with approval of the requested variance by the City’s Municipal Code, and no mitigation is required.

b) *Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views?*

Less than Significant Impact. Under existing conditions, the Project site is surrounded by a variety of commercial and other urban uses. Street lights are located along Marguerite Parkway and Avery Parkway, and exterior parking lot and building lighting is provided for land uses adjacent to and in the vicinity of the Project site. Athletic field lighting at Saddleback College is a prominent source of nighttime lighting in the area. Vehicle headlights traveling on Marguerite Parkway, Avery Parkway, and access roadways, and within existing parking areas is also a source of existing lighting at the Project site and adjacent uses.

The Project would introduce new light sources to the Project site as necessary for security, safety, and wayfinding. However, the lighting would be consistent with existing lighting onsite and in the area. Consistent with Section 9.20.015(l) of the City’s Municipal Code, which establishes general lighting standards, exterior lighting would be shielded or recessed so that direct glare and reflections are confined within the boundaries of the Project, and would be directed downward and away from adjoining properties and public rights-of-way.



Glare is caused by light reflections from pavement, vehicles, and building materials such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on intensity and direction of sunlight. Glare can create hazards to motorists and can be a nuisance for pedestrians and other viewers. Proposed exterior building materials primarily include stucco with stone, wood, and decorative tile. These non-reflective building materials would not result in potential glare impacts within the Project site or surrounding areas, and notably at the street level. Low-reflective vinyl windows would be provided on each level of the proposed building. Glare from vehicle lights at night would be reduced with the Project due to the reduction in the number of vehicle trips to and from the site, and with the provision of underground parking.

Implementation of the Project would not result in a significant source of light or glare that would adversely affect daytime or nighttime views. Accordingly, a less than significant impact would occur.

Mitigation Measures

Implementation of the Project would result in less than significant impacts to aesthetics; therefore, no mitigation measures are required.



3.4.2 Agriculture and Forestry Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>Conflict with existing zoning for agricultural use, or a Williamson Act contract?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) <i>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))?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) <i>Result in the loss of forest land or conversion of forest land to non-forest use?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 City of Mission Viejo is mostly built-out and does not contain any significant agricultural resources. According to mapping conducted by the California Department of Conservation (DOC) as part of the Farmland Mapping & Monitoring Program (FMMP), the Project site is identified as containing “Urban and Built-Up Land” (DOC, 2019a). The Project site and surrounding areas do not contain any soils mapped by the DOC as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland (Farmland). Accordingly, implementation of the Project would not convert Farmland to non-agricultural use. Thus, no impact 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 Project site and areas to the north, west and south, are zoned CH (Commercial Highway), and Saddleback College is zoned CF (Community Facility). (City of Mission Viejo, 2018). There are no existing or proposed agricultural zoning designations affecting the Project site or surrounding area. As



such the Project has no potential to conflict with agricultural zoning designations, and no impact would occur. Additionally, according to information available from the DOC there are no agricultural lands subject to a Williamson Act Contract within the City of Mission Viejo (DOC, 2017). Accordingly, the Project would not conflict with a Williamson Act Contract. No impact would occur and no mitigation is required.

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. As identified above, the Project site and surrounding areas are zoned CH (Commercial Highway) and CF (Community Facility). There are no lands within the City of Mission Viejo zoned for forestland, timberland, or timberland zoned Timberland Production (City of Mission Viejo, 2018). Accordingly, the Project would not be zoned for such uses. No impact would occur and no mitigation is required.

d) *Would the Project result in the loss of forest land or conversion of forest land to non-forest use?*

No Impact. The City of Mission Viejo, including the Project site and properties surrounding the Project site, does not contain any designated forest lands. Under existing conditions, the Project site is developed with commercial/retail use and contains only ornamental landscaping. Accordingly, Project would not result in the loss of forest land or the conversion of forest land to non-forest use. No impact would occur and no mitigation is required.

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. As indicated in the analyses presented above under Thresholds a through d, the Project site and surrounding areas are predominantly developed with commercial uses and do not contain any lands that are used for farmland or forest land. Accordingly, the Project would not 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 the conversion of forest land to non-forest use. Thus, no impact would occur and no mitigation is required.

Mitigation Measures

Implementation of the Project would result in no impacts to agriculture and forestry resources; therefore, no mitigation measures are required.

**3.4.3 Air Quality**

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
<i>a) Conflict with or obstruct implementation of the applicable air quality plan?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>c) Expose sensitive receptors to substantial pollutant concentrations?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section summarizes the MorningStar Air Quality Impact Analysis (AQIA) prepared by Urban Crossroads (Urban Crossroads, 2019a), (November 2, 2019), and included as Appendix A of this IS/MND.

Existing Air Quality Setting

The Project site is in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD. SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. The SCAB encompasses an approximately 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east.

The AQIA included in Appendix A of this IS/MND provides additional details related to the SCAB, the regulatory setting, the regional climate, wind patterns, criteria pollutants and their health effects, existing air quality, and regional air quality improvement. Existing air quality is measured at established South Coast Air Quality Management District (SCAQMD) air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. Criteria pollutants, discussed in detail in the AQIA included in Appendix A of this IS/MND, are pollutants that are regulated through the development of human health-based and/or environmentally based criteria for setting permissible levels, or standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect for each pollutant regulated under these standards, including ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), inhalable particulate matter with a diameter of 10 microns or less (PM₁₀), fine particulate matter with a diameter of 2.5 microns or less (PM_{2.5}), and lead (Pb), are shown in Table 2-2 of the AQIA included in Appendix A. The determination of whether a region's air quality is healthful or unhealthy is determined by comparing contaminant levels in ambient air samples to the State and federal standards. (Urban Crossroads, 2019a)

The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district. On February 20, 2019, the



California Air Resources Board (CARB) posted the 2018 amendments to the state and national area designations. Table 3-3, Attainment Status of Criteria Pollutants in the SCAB, identifies the current attainment designations for the SCAB.

Table 3-3 Attainment Status of Criteria Pollutants in the SCAB

Criteria Pollutant	State Designation	Federal Designation
O ₃ – 1-hour standard	Nonattainment	--
O ₃ – 8-hour standard	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO ₂	Attainment	Unclassifiable/Attainment
SO ₂	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 of the AQIA for a detailed map of State/National Area Designations within the SCAB
“-”= The national 1-hour O₃ standard was revoked effective June 15, 2005
(Urban Crossroads, 2019a, Table 2-3)

The Project site is located within the Source Receptor Area (SRA) 21. The nearest monitoring site is the SCAQMD Saddleback Valley monitoring station is in SRA 19, approximately 5.96 miles north of the Project site. This monitoring station is the nearest long-term air quality monitoring site for O₃, CO, PM₁₀, and PM_{2.5}. Relative to the Project site, the nearest long-term air quality monitoring site for NO₂ is the SCAQMD North Coastal Orange County monitoring station (SRA 18), located approximately 17.23 miles west of the Project site. (Urban Crossroads, 2019a)

The most recent three years of data available is shown on Table 2-4 of the AQIA (included in Appendix A) and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O₃, CO, NO₂, PM₁₀, and PM_{2.5} for 2015 through 2017 was obtained from the SCAQMD Air Quality Data Tables. Additionally, data for SO₂ has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO₂ concentrations. (Urban Crossroads, 2019a)

The Project site is currently developed with an approximate 38,600 sf two-story commercial/retail building that includes retail, restaurant, offices, retail, and automotive services. The existing use generates air quality emissions, as further addressed in the analysis below.

Sensitive Receivers

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, individuals with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as “sensitive receptors.” These structures typically include residences, hotels, hospitals, etc. as they are also known to be locations where an individual can remain for 24 hours. Consistent with the *LST Methodology*, the nearest land use where an individual could remain for 24 hours to the Project site (in this case the nearest



residential land use) has been used to determine construction and operational air quality impacts for emissions of PM₁₀ and PM_{2.5}, since PM₁₀ and PM_{2.5} thresholds are based on a 24 hour averaging time.

Commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for eight hours or less. The *LST Methodology* explicitly states that “*LSTs based on shorter averaging periods, such as the NO₂ and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours.*” Consistent with the LST Methodology, the nearest industrial/commercial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO₂ and CO

The SCAQMD recommends that the nearest receptor be considered when determining the Project’s potential to cause an individual and cumulatively significant impact. Receptors in the Project study area include existing residential homes, commercial uses, and Saddleback College, as described below and shown on Figure 3-4, Sensitive Receiver Locations. (Urban Crossroads, 2019a)

- R1:** Located approximately 839 feet northeast of the Project site, R1 represents an existing baseball field of Saddleback College.
- R2:** Location R2 represents the location of the future replacement golf driving range within Saddleback College at roughly 339 feet. No construction activity was observed during the measurement period.
- R3:** Located approximately 435 feet south of the Project site, R3 represents existing residential homes south of Avery Parkway.
- R4:** Location R4 represents existing commercial uses south of the Project site at roughly 58 feet.
- R5:** Located approximately 34 feet north of the Project site, R5 represents the existing commercial uses east of Marguerite Parkway.

The nearest residential use is used to evaluate construction and operational air quality impacts for emissions of PM₁₀ and PM_{2.5}. The nearest residential receptor to the Project site is located approximately 435 feet/133 meters south Project site on Avery Parkway. For evaluating localized NO₂ and CO impacts, the nearest commercial receptor is located 34 feet/10 meters north of the Project site on Marguerite Parkway. It should be noted that although the nearest commercial receptor is 10-meters from the Project site, the LST Methodology explicitly states that “*LSTs base on shorter averaging periods, such as the NO₂ and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours.*” As such a 25-meter receptor distance is used for NO₂ and CO.

Regulatory Requirements

The Regulatory Requirements (RRs) listed below (or equivalent language) are required on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any development permits. SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). It should be noted that these Best Available Control Measures (BACMs) are



not mitigation as they are standard RRs. As such, credit for Rule 403 and Rule 1113 have been taken in the air quality modeling conducted for the Project.

RR AQ-1 The contractor shall adhere to applicable measures contained in Table 1 of Rule 403 including, but not limited to:

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

RR AQ-2 The following measures shall be incorporated into Project plans and specifications as implementation of SCAQMD Rule 1113:

Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) consistent with SCAQMD Rule 1113 shall be used.

a) *Would the Project conflict with or obstruct implementation of the applicable air quality plan?*

No Impact. As identified above, within the SCAB, the SCAQMD is principally responsible for air pollution control. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. The SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as State and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet State and federal ambient air quality standards. Currently, these State and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of air quality management plans (AQMPs) to meet the State and federal ambient air quality standards. AQMPs are updated regularly to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. As identified previously, the SCAB is in nonattainment for the federal and State standards for O₃ and PM_{2.5}. In addition, the SCAB is in nonattainment for the State PM₁₀ standard.



LEGEND:

-  Receptor Locations
-  Distance from receptor to Project site boundary (in feet)

Source(s): Urban Crossroads (08-14-2019)

Figure 3-4



Not to Scale



SENSITIVE RECEIVER LOCATIONS



In March 2017, the SCAQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS and CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 Regional Transportation/Sustainable Communities Strategy (RTP/SCS) and updated emission inventory methodologies for various source categories. The Project's consistency with the AQMP has been determined using the criterion defined in Chapter 12, Sections 12.2 and 12.3 of the SCAQMD CEQA Air Quality Handbook, which and are discussed below. (Urban Crossroads, 2019a)

- **Consistency Criterion No. 1.** *The Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.*

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs or regional significance thresholds were exceeded. As evaluated under Threshold b, the Project's regional and localized construction-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected. Therefore, the Project is determined to be consistent with the Criterion No. 1.

- **Consistency Criterion No. 2.** *The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.*

The 2016 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Mission Viejo General Plan is consistent with the AQMP. As further discussed in the Population and Housing section of this Initial Study, the Project would provide 166 beds; however, the majority of the residents would likely already live in the City or local area.

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the Project site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities.

The City of Mission Viejo designates the Project site as Commercial Highway. Commercial activities within this designation include highway-oriented businesses providing goods and services to a broad population utilizing major transportation corridors. Uses within the Commercial Highway category include those described in both the Commercial Neighborhood and Community categories, and include other uses which serve both local and non-local populations, such as, automobile and motorcycle dealerships, auto service operations, and hotels and motels. Specialized housing designed to meet the physical and social needs of senior citizens is allowed provided the property is situated in the Senior Housing Overlay Zone and subject to a Planned Development Permit, which are being requested as part of the Project. The Project involves a congregate care/assisted living facility, with



102 AL units, 30 MC units, and additional support facilities. The Project’s land uses are not consistent with the adopted zoning. However, the Project would generate less traffic and consequently fewer traffic-related emissions in comparison to the existing commercial/retail uses which generates more trips and consequently more emissions than the Project. The Project would result in a net decrease in NO_x, CO, SO_x, PM₁₀, PM_{2.5}. VOC emissions would be slightly increased due to the use of consumer products. Therefore, the Project is determined to be consistent with the second criterion.

As such, the Project would be consistent with the AQMP. No impact would result and no mitigation is required. (Urban Crossroads, 2019a)

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. Land uses such as the Project affect air quality through construction-source and operational-source emissions. On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model (CalEEMod) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in the AQIA included in Appendix A of this IS/MND. (Urban Crossroads, 2019a)

Emissions Thresholds

The SCAQMD has also developed regional significance thresholds for regional regulated pollutants, as summarized in Table 3-4, Maximum Daily Regional Emissions Thresholds.

Table 3-4 Maximum Daily Regional Emissions Thresholds

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

Note: Regional Thresholds presented in this table are based on the SCAQMD Air Quality Significance Thresholds, March 2015 (Urban Crossroads, 2019a, Table 3-1)



Furthermore, the SCAQMD has developed localized significance thresholds for regulated pollutants, as summarized in Table 3-5, Maximum Daily Localized Emissions Thresholds. The SCAQMD’s CEQA Air Quality Significance Thresholds (March 2015) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

Since the total acreage disturbed is less than five acres per day for demolition, site preparation, and the grading phases, the SCAQMD’s screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identifies thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized, consistent with SCAQMD guidance, to interpolate the threshold values for the other disturbed acreage and distances not identified in the look-up tables. (Urban Crossroads, 2019a)

Table 3-5 Maximum Daily Localized Emissions Thresholds

Pollutant	Construction	Operations
Localized Thresholds		
NO _x	131 lbs/day (Demolition)	N/A
	111 lbs/day (Site Preparation)	
	191 lbs/day (Grading)	
CO	759 lbs/day (Demolition)	N/A
	845 lbs/day (Site Preparation)	
	696 lbs/day (Grading)	
PM ₁₀	38 lbs/day (Demolition)	N/A
	35 lbs/day (Site Preparation)	
	32 lbs/day (Grading)	
PM _{2.5}	14 lbs/day (Demolition)	N/A
	13 lbs/day (Site Preparation)	
	12 lbs/day (Grading)	

Note: Localized Thresholds presented in this table are based on the SCAQMD Final Localized Significance Threshold Methodology, July 2008 (Urban Crossroads, 2019a, Table 3-7)

Regional Construction Impacts

Construction activities associated with the Project would result in emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. Construction-related emissions are expected from the following construction activities: demolition, site preparation, grading, building construction, paving, and architectural coating. For analysis purposes in this IS/MND, construction is expected to commence in June 2020 and will last through December 2021. The construction schedule utilized in the analysis (shown in Table 2-1 of this IS/MND) represents a “worst-case” analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. The duration of construction activity was based upon the 2021 opening year. A detailed summary of construction equipment is provided in Table 3-3 in Appendix A of this IS/MND. The site-specific construction fleet may vary due to specific project needs at the time of



construction. The duration of construction activity and associated equipment both represent a reasonable approximation of the expected construction fleet. Specific modeling assumptions and detailed modeling inputs/outputs are provided in the AQIA included in Appendix A. (Urban Crossroads, 2019a)

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-6, Emissions Summary of Construction Activities (Pounds Per Day) (Without Mitigation). The SCAQMD Rules that are applicable to the Project’s construction activities include Rule 403 and Rule 1113 (refer to RR AQ-1 and RR AQ-2). As such, credit for Rule 403 (fugitive dust control) and Rule 1113 (architectural coatings) have been taken in the air quality modeling conducted for the Project. Compliance with Rule 403 is also required by the City of Mission Viejo General Plan EIR MM AQ-1 and requires the implementation of dust control measures, including regular watering of active grading areas and unpaved roads, limiting vehicle speeds on unpaved surfaces, stabilizing stockpiled earth, and curtailing grading operations during high wind conditions. SCAQMD Rule 1113 limits the VOC content of architectural coatings. (Urban Crossroads, 2019a)

As shown in Table 3-6, emissions resulting from Project construction activities would not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutant.

Table 3-6 Emissions Summary of Construction Activities (Pounds Per Day) (Without Mitigation)

Year	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2020	2.87	24.56	19.18	0.05	3.95	2.20
2021	21.39	29.20	31.89	0.07	3.39	1.86
Maximum Daily Emissions	21.39	29.20	31.89	0.07	3.95	2.20
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

lbs/day – Pounds Per Day

Source: CalEEMod regional construction-source emissions are presented in Appendix 3.1 of the AQIA included in Appendix A. (Urban Crossroads, 2019a, Table 3-4)

Localized Construction Impacts

The construction area for the Project site is approximately 1.85 acres. Table 3-7 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Outputs from the model runs for construction LSTs are provided in the AQIA included in Appendix A of this IS/MND. As shown, Project construction-source emissions would not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for Project-related local construction-source emissions and mitigation is not required. (Urban Crossroads, 2019a)



Table 3-7 Localized Significance Summary Construction (Without Mitigation)

On-Site Demolition Emissions	Emissions (lbs/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	20.95	14.66	2.11	1.22
SCAQMD Localized Threshold	131	759	38	14
Threshold Exceeded?	NO	NO	NO	NO
On-Site Site Preparation Emissions	Emissions (lbs/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	19.76	8.23	3.86	2.18
SCAQMD Localized Threshold	111	845	35	13
Threshold Exceeded?	NO	NO	NO	NO
On-Site Grading Emissions	Emissions (lbs/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	10.84	7.36	0.89	0.47
SCAQMD Localized Threshold	191	696	32	12
Threshold Exceeded?	NO	NO	NO	NO

Source: CalEEMod localized construction-source emissions are presented in Appendix 3.1 of the AQIA included in Appendix A. (Urban Crossroads, 2019, Table 3-8)

Regional Long-Term Operational Impacts

Operational activities associated with the Project would result in emissions of VOCs, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. Operational emissions would be expected from the following primary sources: area source emissions, energy source emissions, mobile source, and stationary source emissions, as described in the AQIA in Appendix A of this IS/MND. (Urban Crossroads, 2019a)

Operational-source emissions are summarized in Table 3-8, Summary of Operational Emissions. As shown, the Project would not exceed the applicable regional thresholds of significance established by the SCAQMD for emissions of any criteria pollutant. Rather, when taking into consideration emissions from the existing uses on the Project site (and associated trip generation) there would be a net decrease for each criteria pollutant, with the exception of VOCs, generated by consumer products. Accordingly, the Project would not emit substantial concentrations of these pollutants during long-term operation and would not contribute to an existing or projected air quality violation, on a direct or cumulatively-considerable basis. Impacts associated with long-term emissions from operation of the Project would be less than significant and mitigation is not required. (Urban Crossroads, 2019a)



Table 3-8 Summary of Operational Emissions

Operational Activities – Summer Scenario	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	4.19	2.32	11.86	0.01	0.24	0.24
Energy Source	0.04	0.38	0.16	2.43e-03	0.03	0.03
Mobile Source	0.82	3.29	11.33	0.04	3.82	1.04
Stationary Source	0.16	0.67	2.24	0.01	0.17	0.17
Total Maximum Daily Emissions	5.22	6.66	25.59	0.07	4.26	1.48
Existing Emissions	3.23	8.67	26.54	0.09	8.20	2.24
Net Emissions (Project – Existing)	1.99	-2.01	-0.95	-0.02	-3.95	-0.76
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Operational Activities – Winter Scenario	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	4.19	2.32	11.86	0.01	0.24	0.24
Energy Source	0.04	0.38	0.16	2.43e-03	0.03	0.03
Mobile Source	0.81	3.39	10.82	0.04	3.82	1.04
Stationary Source	0.16	0.67	2.24	0.01	0.17	0.17
Total Maximum Daily Emissions	5.21	6.76	25.08	0.07	4.26	1.48
Existing Emissions	3.20	8.86	25.83	0.09	8.20	2.24
Net Emissions (Project – Existing)	2.01	-2.10	-0.75	-0.02	-3.95	-0.76
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

(Urban Crossroads, 2019a)

Localized Operational Impacts

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The Project, which consists of a congregate care/assisted living facility, does not include such uses. Due to the lack of significant stationary source emissions, no long-term localized significance threshold analysis is needed. (Urban Crossroads, 2019a)

Impact Summary

The Project site is located in the SCAB, which is designated as a non-attainment area for O₃, PM₁₀, and PM_{2.5}. The evaluation of Project-specific air pollutant emissions presented in the preceding analysis



demonstrates that the Project would not exceed any applicable regional or local thresholds that are designed to assist the region in attaining the applicable State and national ambient air quality standards. Notably, there would be a net decrease for each criteria pollutant during operation, with the exception of VOCs, generated by consumer products. In addition, as described above, the Project would be required to adhere to mandatory regulatory requirements and SCAQMD Rules, notably Rule 403 and Rule (refer to RR AQ-1 and RR AQ-2). Compliance with these regulatory requirements, which are imposed on all development projects in the SCAB, would minimize emissions of O₃ and PM₁₀ and PM_{2.5}.

As further discussed in Section 3.12, Cumulative Impacts, of the AQIA included in Appendix A, the SCAQMD considers all individual project air pollutant emissions that exceed the SCAQMD regional thresholds to also be cumulatively-considerable. Conversely, if a project does not exceed the SCAQMD regional thresholds, then SCAQMD considers that a project's air pollutant emissions to be less than cumulatively-considerable. Therefore, the Project's air emissions during construction and operation would be less than cumulatively-considerable. This impact is less than significant and no mitigation is required. (Urban Crossroads, 2019a)

c) *Would the Project expose sensitive receptors to substantial pollutant concentrations?*

Less than Significant Impact. As identified previously, there are sensitive receptors in proximity to the Project site. The nearest sensitive receptors to the Project are existing residential outdoor living areas (backyards) located approximately 435 feet/133 meters south Project site along Avery Parkway. The nearest non-residential receptor is a commercial use located 34 feet/10 meters north of the Project site. The following analysis discusses criteria pollutants from on-site construction and operation and CO hotspots.

Localized Impacts from Criteria Pollutants

As analyzed under Threshold b, above, the Project would not exceed establish LSTs, and impacts to sensitive receptors from criteria pollutant emissions would be less than significant.

Carbon Monoxide Hotspots

An adverse CO concentration, known as a "hot spot," would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO. CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 3-5. (Urban Crossroads, 2019a)

Section 3.8 of the AQIA included in Appendix A of this IS/MND includes a CO "Hot Spot" Analysis for the Project based on analyses approaches used by the SCAQMD and Bay Area Air Quality Management District (BAAQMD). The analysis concludes that the Project would not be capable of resulting in a CO "hot spot" at any study area intersections (Urban Crossroads, 2019a).



This conclusion is further validated by the fact that when taking into consideration existing trip generation from the current uses at the Project site, the Project would result in a net reduction in trip generation, and associated number of vehicles at intersections in the Project vicinity during peak periods. As further discussed in the Transportation section of this IS/MND, the Project would result in a net reduction of 4 AM peak hour trips and 102 PM peak hour trips.

Therefore, the Project would not produce the volume of traffic required to generate a CO “hot spot” either in the context of the 2003 Los Angeles hot spot study or based on representative BAAQMD CO threshold considerations. Therefore, CO “hot spots” are not an environmental impact of concern for the Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant. (Urban Crossroads, 2019a)

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. According to the SCAQMD’s CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses (livestock and farming), wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The Project does not contain land uses typically associated with emitting objectionable odors.

Potential odor sources associated with the Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Project’s (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. Project-generated refuse would be stored in covered containers in the underground parking level and removed at regular intervals in compliance with the City’s solid waste regulations. The Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the Project construction and operations would be less than significant and no mitigation is required. (Urban Crossroads, 2019a)

Mitigation Measures

The Project would result in less than significant impacts to air quality; therefore, no mitigation measures are required.



3.4.4 Biological Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) <i>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 impeded the use of native wildlife nursery sites?</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) <i>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) <i>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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. The western portion of the Project site is currently developed with a commercial/retail building and associated parking lot within an urbanized portion of Mission Viejo; this area contains limited ornamental trees and landscaping along Marguerite Parkway and throughout the surface parking lot. The engineered slope in the eastern portion of the Project site also includes limited vegetation, with



eucalyptus trees at the base of the slope. As part of the Project, existing vegetation within the developed portion of the Project site would be removed and replaced with a variety of trees and ornamental vegetation. The eucalyptus trees along the base of the engineered slope would be removed; however, additional trees would be planted. Due to the lack of suitable habitat, no special-status species are anticipated on the Project site. The removal of on-site vegetation and trees would not have a substantial significant adverse effect on candidate, sensitive, or special-status species, as defined by the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS). In addition, there are no known sensitive species or habitats on the Project site as identified in local/regional plans, policies, or regulations, or by the CDFW or USFWS. No impact would result 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 western portion of the Project site is currently developed with a commercial/retail building and associated parking lot, and the eastern portion of the Project site consists of an engineered slope. The Project site is in an urbanized area in the City of Mission Viejo and vegetation onsite is limited to ornamental species. Based on review of Figure COS-1, Open Space for the Preservation of Natural Resource, of the General Plan Conservation/Open Space Element, the Project site does not contain a riparian corridor, biologically sensitive lands, or water bodies (City of Mission Viejo, 2013a). Further, according to the National Wetlands Inventory managed by the USFWS, the Project site does not contain wetlands or riparian habitat (USFWS, 2019). Additionally, there is no riparian habitat or other sensitive natural communities as identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Therefore, development of the Project would not impact riparian habitat or other sensitive natural community 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. As identified above, under existing conditions, the Project site consists of a commercial/retail building and associated parking lot, and an engineered slope with ornamental vegetation. Runoff from the Project site is captured in a catch basin along Marguerite Parkway and directed to the municipal storm drain system; there are no riparian corridors or water bodies within the Project site. The Project site does not contain state or federal protected wetlands. Therefore, development of the Project would not impact 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 impeded the use of native wildlife nursery sites?*

Less than Significant with Mitigation Incorporated. As identified previously, the Project site contains various trees and shrubs, including along the engineered slope in the eastern portion of the site. The Project site and immediately surrounding areas are developed urban areas and do not function as a wildlife movement corridor. Based on review of Figure 41-M, Wildlife Corridors and Habitat Linkages, of the Orange County Southern Sub-Region Natural Community Conservation Plan/Master Streambed



Alteration Agreement/Habitat Conservation Plan (NCCP/MsAA/HCP), the nearest wildlife corridor and habitat linkage to the Project site along the Arroyo Trabuco is approximately 2.7 miles northeast of the Project site (County of Orange, 2006). However, the Arroyo Trabuco extends south and is approximately 0.5 mile east of the Project site, east of Saddleback College. Any species that may inhabit the Project site are either able to fly in or navigate on the ground through long stretches of urban development. Further, no portion of the Project site contains an open body of water that serves as natural habitat in which fish could exist. Therefore, the project site does not contain any native resident or migratory fish, wildlife species, or wildlife corridors.

However, due to the presence of trees and shrubs on the Project site, there is the potential for birds protected by the Federal Migratory Bird Treaty Act (MBTA) to nest at the Project site. The MBTA makes it illegal to take, possess, buy, sell, purchase, or barter any migratory bird listed in the Code of Federal Regulations (Title 50, Part 10), including feathers, nests, eggs, or other avian products. This includes the active nests of all bird species, including common species. Existing trees and other vegetation on the Project site would be removed during the demolition phase of project construction. These activities could disturb nesting birds and destroy their eggs and/or nests.

To prevent impacts to nesting birds and their eggs and nests, if possible, vegetation removal should occur during the non-nesting bird season (between September 16 and January 31). If vegetation removal occurs during the nesting season (between February 1 and September 15), Project activities could impact an active nest resulting in a potentially significant impact. To reduce this potential impact, MM BIO-1 requires a pre-construction survey for nesting birds and describes the methods for managing any active nest sites, if encountered. Implementation of MM BIO-1 would reduce potential impacts related to nesting birds to a less than significant level.

e) *Would the Project conflict with any local polices or ordinances protecting biological resources, such as tree preservation policy or ordinance?*

No Impact. Chapter 14.30 of the City's Municipal Code regulates planting, maintenance, protection, and removal of trees and shrubs on City-owned property. As part of the Project, existing trees would be removed and replaced with a variety of trees and ornamental landscaping; however, no trees would be removed within the public right-of-way. Therefore, implementation of the project would not result in the removal of protected trees and vegetation.

The City's Conservation/Open Space Element (City of Mission Viejo, 2013a) includes policies protecting biological and natural resources within Mission Viejo. According to the Conservation/Open Space Element, the coast live oak (*Quercus agrifolia*) is the City's official tree, and as such, the City shall regulate removal or destruction of such trees. The Project would include the removal of several ornamental trees and shrubs within the Project site; however, no coast live oak trees would be removed.

Therefore, implementation of the Project would not conflict with any local policies or ordinances protecting biological resources (e.g., a tree preservation policy or ordinance). No impact would occur and no mitigation would be required.



f) *Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation plan, or other approved local, or state habitat conservation plan?*

No Impact. The Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MsAA/HCP) and Joint Programmatic Environmental Impact Report/Environmental Impact Statement (EIR/EIS) were prepared by the County of Orange in cooperation with the California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS) in accordance with the provisions of the NCCP Act, the California Endangered Species Act (CESA), the Federal Endangered Species Act (FESA), and Section 1600 et seq. of the California Fish and Game Code. The Southern Subregion NCCP/MsAA/HCP provides for the conservation of designated State- and federally listed and unlisted species and associated habitats that are currently found within the 132,000-acre NCCP/MsAA/HCP study area. The NCCP/MsAA/HCP is a voluntary, collaborative planning program involving landowners, local governments, State and federal agencies, environmental organizations, and interested members of the public. The purpose of the NCCP Program is to provide long term, large-scale protection of natural vegetation communities and wildlife diversity while allowing compatible land uses and appropriate development and growth. The NCCP process was initiated to provide an alternative to “single species” conservation efforts. The shift in focus from single species, project-by-project conservation efforts to large-scale conservation planning at the natural community level was intended to facilitate regional and subregional protection of a suite of species that inhabit a designated natural community or communities. (County of Orange, 2006)

The Conservation Strategy of the NCCP/MsAA/HCP “focuses on long-term protection and management of multiple natural communities that provide habitat essential to the survival of a broad array of wildlife and plant species”. The NCCP/MsAA/HCP creates a permanent habitat reserve consisting of (1) 11,950 County of Orange-owned acres contained within three existing County regional and wilderness parks (O’Neill Regional Park, Riley Wilderness Park, and Ralph W. Caspers Wilderness Park) and (2) 20,868 acres owned by Rancho Mission Viejo (RMV). To address the potential impacts associated with the NCCP/MsAA/HCP, future projects were identified by the participating landowners (i.e., the County of Orange, Santa Margarita Water District [SMWD], and RMV), which upon approval of the NCCP/MsAA/HCP and issuance of the Incidental Take Permits (ITPs) by USFWS became “Covered Activities”.

The City of Mission Viejo is not a Permittee under the NCCP/MsAA/HCP; however, the City participates in provisions of the NCCP/MsAA/HCP related to preservation of coastal sage scrub. The Project site does not include coastal sage scrub habitat. As noted above, the Project site is not in an area identified as a wildlife corridor or habitat linkage. Further, the Project site is not in an area designated for preservation in the NCCP/MsAA/HCP. Therefore, the Project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State HCP, and no mitigation would be required.

Mitigation Measures

MM BIO-1 In the event that vegetation and tree removal should occur between February 1 and September 15, the Project Applicant (or its contractor) shall retain a qualified biologist to conduct a nesting bird survey no more than 3 days prior to commencement of construction activities. The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by project-related construction activities such as noise, human activity, and dust. If active nesting of birds is observed within 100 feet of the designated construction area prior to construction, the



biologist shall establish suitable buffers around the active nests (e.g., as much as 500 feet for raptors and 300 feet for non-raptors [subject to the recommendations of the qualified biologist]), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. Prior to commencement of grading activities and issuance of any building permits, the Director of the Community Development Department, or designee, shall verify that all project grading and construction plans include specific notes regarding the requirements of the Migratory Bird Treaty Act (MBTA), that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field with orange snow fencing.



3.4.5 Cultural Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) <i>Disturb any human remains, including those interred outside of formal cemeteries?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section summarizes the Phase I Cultural Resources Survey prepared by Brian F. Smith and Associates, Inc. (BFSa) (BFSa, 2019a), (July 9, 2019), and included as Appendix B of this IS/MND.

a) *Would the Project cause a substantial adverse change in the significant of historical resources pursuant to §15064.5?*

No Impact. The Project site is developed with a commercial/retail building and surface parking lot. An archaeological records search and literature review was conducted by BFSa at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton (CSUF), which included review of previously recorded cultural resources, and review of the National Register of Historic Places (NRHP), the Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility, the OHP Directory of Properties in the Historic Property Data File, Bureau of Land Management (BLM) General Land Office (GLO) records, historic maps, and aerial photographs associated with the Project site. No historic resources were identified at the Project site and recorded historic resources within one-mile of the Project site were limited to a historic trash scatter, historic well, historic water tanks, and a historic barn. Based on review of the BLM GLO records, historic maps, and aerial photographs associated with the Project site, the Project site was undeveloped and primarily used for agriculture until the early 1970’s. By 1974, the Project site was fully developed with the commercial/retail structure and hardscape currently found at the Project site. Because the current structure on the property was developed in the early- to mid-1970s, it does not meet the requirements to be evaluated for inclusion within the California Register of Historical Resources (CRHR). (BFSa, 2019a).

Because the existing structure on the Project site is not on federal, State, or local lists of designated historic resources and not eligible for listing, the building is not historically significant as defined by CEQA Guidelines §15064.5 and no impact to historical resources would occur.

b) *Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?*

Less than Significant Impact. The archaeological records search and literature review did not identify any archaeological resources at the Project site. The previously recorded resources on file with the SCCIC consist of two prehistoric lithic scatters, one prehistoric shell scatter with possible midden soil, one prehistoric isolate, and one multicomponent site consisting of a prehistoric lithic scatter. These prehistoric sites tend to be situated within the surrounding foothills and along the Trabuco Creek drainage. Although



few sites have been recorded near the Project or within the Oso Creek drainage, the Oso Creek drainage would have encompassed a direct path between two known ethnographic/late prehistoric village sites. The ethnographic village of Nigüil (also known as Aliso Crossing), is generally identified within the ethnography to the north of the Project site. Nigüil is usually referenced as the location where Aliso Creek crossed U.S. Highway 101 (now I-5). In addition, the Late Prehistoric Acjachemen site known as "Peutuidem" (Putiidum) is located approximately two miles south of the Project site near San Juan Capistrano, just south of the convergence of Oso and Trabuco creeks (BFSA, 2019a).

Development for the existing commercial/retail building began in 1973 and has likely removed any potential for subsurface cultural resources to be present. The geotechnical investigation conducted for the Project indicates the current development is situated on top of anywhere between 3- to 15-feet of artificial fill which was placed on the property during the initial construction activities, and the existing ground was scarified to a depth of 12-inches and recompacted prior to the placement of five to seven inches of new fill, consisting exclusively of on-site soils and bedrock of the Capistrano Formation. In addition, it is anticipated that excavations necessary for the Project would likely only encounter the artificial fill and the underlying Tertiary Capistrano Formation, further indicating a low potential to encounter any buried cultural resources (BFSA, 2019a).

Although the Project site is situated at the base of the foothills between the Oso and Trabuco Creek drainages and multiple archaeological sites have been documented within the Aliso Creek Watershed to the north and Trabuco Canyon to the east, only a limited number of resources have been recorded within one mile of the Project site. Therefore, due to the level of disturbance already identified within the Project site, the potential for buried cultural resources is low and no further archaeological study is required (BFSA, 2019a). This impact is less than significant and no mitigation is required.

c) *Would the Project disturb any human remains, including those interred outside of formal cemeteries?*

No Impact. The Project site is not known to have ever been used as a cemetery. The possibility of uncovering human remains during Project-related grading activities is also remote due to fact that the previous development of the site has substantially disturbed the subsurface of the site. Pursuant to California Health and Safety Code Section 7050.5, in the unlikely event human remains are encountered during ground-disturbing activities, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin. Pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made by the Coroner. If the Coroner determines the remains to be Native American, the California Native American Heritage Commission (NAHC) must be contacted and the NAHC must then immediately notify the "most likely descendant(s)" of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. Mandatory compliance with these requirements would ensure that no impacts associated with the discovery of human remains would occur.

Mitigation Measures

Implementation of the Project would result in less than significant impacts to cultural resources; therefore, no mitigation measures are required.



3.4.6 Energy

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) <i>Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Information presented in this section is based on the *MorningStar Senior Living Energy Analysis* (Energy Analysis), prepared by Urban Crossroads (November 2, 2019) for the Project (Urban Crossroads, 2019b), included as Appendix C of this IS/MND. The Energy Analysis provides an overview of energy use in California, including electricity and natural gas, and transportation energy resources.

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

Less than Significant Impact. Below is an analysis of the Project’s anticipated energy use to determine if the Project would result in the wasteful, inefficient, or unnecessary consumption of energy. Information from the CalEEMod 2016.3.2 outputs for the Project’s Air Quality Impact Analysis was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands (Urban Crossroads, 2019a).

Project-Related Construction Energy Use

The Project’s construction process would consume electrical energy and fuel. Project-related construction would represent a “single-event” electric energy and fuel demand and would not require on-going or permanent commitment of energy or diesel fuel resources for this purpose.

The estimated power cost of on-site electricity usage during the construction of the Project is estimated to be \$6,932.20. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be around 17,623 kilowatt-hours (kWh).

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. Construction equipment used by the Project would result in single event consumption of approximately 38,245 gallons of diesel fuel. The equipment used for Project construction would conform to CARB regulations and State emissions standards. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel. The Project would utilize construction contractors which practice compliance with applicable CARB regulations regarding



retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption. CCR Title 13, Title 13, Motor Vehicles, Section 2449(d)(3), Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Best available control measures inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

Construction worker trips for construction of the Project would generate an estimated 520,821 VMT, and would result in the estimated fuel consumption of 16,872 gallons of fuel generated by light-duty autos (LDAs). City and regional commercial vendors would supply diesel fuel. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2018 Integrated Energy Policy Report (IEPR) released by the California Energy Commission (CEC) has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements.

The construction vendor/hauling trips would generate an estimated 124,864 VMT along area roadways. It is estimated that 2,738 gallons of fuel would be consumed related to construction vendor trips (medium duty trucks) during construction of the Project, and fuel consumption from construction vendor and hauling trips (heavy duty trucks) would be approximately 17,365 gallons. The total fuel consumption from construction vendor and hauling trips (medium and heavy-duty trucks) is 20,603 gallons.

As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, 2019b)

Project-Related Operational Energy Use

Annual vehicular trips and related vehicle miles traveled (VMT) generated by Project operations (estimated at 1,545,861 annual VMT) would result in an estimated 50,078 gallons of fuel consumption per year for LDAs. Current and future commercial vendors would provide fuel. Trip generation and VMT generated by the Project are consistent with other residential uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Ed., 2017); and CalEEMod. That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption.



Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of LDAs to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project would implement sidewalks, facilitating and encouraging pedestrian access. In compliance with the CALGreen, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

Project facility operational energy demands are estimated at: 1,508,420 kilo-British thermal units (kBTU)/year of natural gas; and 808,364 kWh/year of electricity. Natural gas would be supplied to the Project by SCG; electricity would be supplied by SDG&E. The Project proposes residential uses reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total would be comparable to, or less than, other warehouse projects of similar scale and configuration.

The Project would not result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure because it would be served by the existing electric utility lines in the Project vicinity. Additionally, it should be noted that the Project would be developed consistent with the 2019 Building and Energy Efficiency Standards and the 2019 California Green Building Standards requirements. These standards would promote a more efficient use of energy as compared to the energy usage of the current development. (Urban Crossroads, 2019b).

Project operations would not result in the inefficient, wasteful, or unnecessary consumption of energy. Further, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California. This impact is less than significant and no mitigation is required.

b) *Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?*

No Impact. Federal and state agencies regulate energy use and consumption through various means and programs. As further discussed in the Energy Analysis included as Appendix C, the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the PUC and the California Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below. Project consistency with applicable federal and state regulations is also presented below.



Federal Regulations

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

Project Consistency: Transportation and access to the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site. (Urban Crossroads, 2019b)

The Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

Project Consistency: The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and takes advantage of existing infrastructure systems. Additionally, the Project would generate less traffic compared to the existing development and would therefore reduce VMT. The Project supports the strong planning processes emphasized under TEA-21 and is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21. (Urban Crossroads, 2019b).

State Regulations

Integrated Energy Policy Report

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the California Energy Commission to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301a)). The Energy Commission prepares these assessments and associated policy recommendations every two



years, with updates in alternate years, as part of the Integrated Energy Policy Report. The 2018 Integrated Energy Policy Report (2018 IEPR) was adopted February 20, 2019, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2018 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast.

Project Consistency: Electricity would be provided to the Project by SDG&E and natural gas is provided by SCG. The 2018 Corporate Sustainability Report for both SDG&E and SCG build on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2018 IEPR. (Urban Crossroads, 2019b)

State of California Energy Plan

The CEC is responsible for preparing the State of California Energy Plan (State Energy Plan), which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. 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 several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

Project Consistency: The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and takes advantage of existing infrastructure systems. Additionally, the Project would generate less traffic compared to the existing development and would therefore reduce VMT. As such, the Project supports urban design and planning processes identified under the State Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State Energy Plan. (Urban Crossroads, 2019b)

California Code Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the California Energy Commission (CEC) and will become effective on January 1, 2020. The 2019 Title 24 standards go into effect on January 1, 2020 and are applicable to building permit applications submitted on or after that date. The 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7 percent less energy compared to the



residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will about 53 percent less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30 percent less energy due to lighting upgrades.

Project Consistency: As a conservative measure, the analysis herein assumes compliance with the 2016 Title 24 Standards and no additional reduction for compliance with the 2019 standards have been taken. It should be noted that while the Project currently does not include solar energy generation, the building roof structure would be designed to support solar panels in the future, as required by the 2019 Title 24 Building Energy Efficiency Standards. (Urban Crossroads, 2019b)

Mitigation Measures

Implementation of the Project would result in less than significant impacts due to Energy; therefore, no mitigation measures are required.



3.4.7 Geology and Soils

Environmental Issue Areas Examined	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18- 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Information presented in this section is primarily based on a Project-specific *Geotechnical Exploration Report, Proposed Senior Housing Development* (Geotechnical Report) (July 3, 2019), prepared by Leighton for the Project (Leighton, 2019a) and a Project-specific *Paleontological Assessment for the MorningStar Marguerite Project* (Paleontological Assessment) (July 8, 2019) (BFSA, 2019b), prepared by BFSA. The Geotechnical Report and Paleontological Assessment are included in Appendix D and Appendix E, respectively, of this IS/MND.



-
- 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?**
 - ii) **Strong seismic ground shaking?**
 - iii) **Seismic-related ground failure, including liquefaction?**
 - iv) **Landslides?**
-

- a.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?*

No Impact. There are no known faults on the Project site and the Project site is not located within an Alquist-Priolo earthquake fault zone (Leighton, 2019a). Therefore, no impacts related to the rupture of a known earthquake fault, as depicted on the most recent Alquist-Priolo Earthquake Fault Zoning Map, are anticipated to occur as a result of Project implementation. No mitigation would be required.

- a.ii) *Strong seismic ground shaking?*

Less than Significant with Mitigation Incorporated. Southern California is a seismically active area and properties in the City of Mission Viejo, including the Project site, are subject to periodic ground shaking and other effects from earthquake activity along nearby and regional faults. The closest active faults in the regional vicinity with the potential to cause ground shaking in the City of Mission Viejo are the San Joaquin Hills blind thrust fault, Newport-Inglewood Fault Zone and the Whittier-Elsinore Fault Zone, located approximately 3.4 mile, 7.4 miles, and 15.9 miles from the site, respectively. The San Joaquin Hills fault is a blind thrust fault that is concealed at depth, without the potential for surface fault rupture. The San Andreas fault, which is the largest active fault in California, is approximately 49 miles northeast of the site. The Project may experience moderate to strong ground shaking resulting from an earthquake from one of the major regional faults. The probabilistic seismic hazard analysis indicates the modal seismic event is Magnitude 6.9 at approximately 4.0 miles from the Project site. Similar to all other development projects within Southern California, the Project has the potential to expose people or structures to adverse effects associated with seismic events. (Leighton, 2019a)

Ground shaking generated by fault movement is considered a potentially significant impact that may affect the Project. The Project would be required to comply with the most current California Building Code (CBC) and City Building Code, which require appropriate seismic design provisions be implemented with Project design and construction. The Geotechnical Report (Leighton, 2019a) concludes that no adverse geological or geotechnical hazards exist at the Project site that would preclude the development of the project as currently planned, provided the recommendations provided in the Geotechnical Investigation are incorporated into the design and construction of the Project, as required by MM GEO-1. There would be less than significant impacts related to strong ground-shaking with adherence to the CBC and City Building Code and implementation of MM GEO-1. Therefore, impacts would be less than significant with implementation of MM GEO-1.



a.iii) *Seismic-related ground failure, including liquefaction?*

Less than Significant Impact. Liquefaction is a phenomenon where cyclic stresses, which are produced by earthquake-induced ground motions, create excess pore pressures in cohesionless soil. As a result, the soils may acquire a high degree of mobility, which can lead to lateral spreading, consolidation, and settlement of loose sediments, ground oscillation flow failure, loss of bearing strength, ground fissuring, sand boils, and other damaging deformations. In general, liquefaction hazards are the most severe in the upper 50 feet bgs. As shown on the State of California Seismic Hazard Zones map for the San Juan Capistrano Quadrangle, the Project site is not located within an area that has been identified by the State of California as being potentially susceptible to liquefaction (refer to Figure 4, Seismic Hazard Map of Geotechnical Report in Appendix D). During geotechnical investigations, groundwater was not encountered in borings drilled to a maximum depth of 50 feet bgs. Furthermore, the site is underlain by a thin veneer of compacted fill materials overlying fine-grained, cohesive, bedrock. Therefore, the potential for liquefaction to occur at the site is negligible. (Leighton, 2019a)

Seismically-triggered liquefaction may result in the phenomenon of lateral spreading in proximity to slopes and in gently sloping terrain. Lateral spread generally requires the presence of liquefied zones of relatively large lateral extent in which the non-liquefied overlying soils gradually displacement down-gradient or toward a free slope face such as the bank of a channel. Because liquefaction is not considered a hazard at the site, seismically-induced lateral spreading and the associated ground displacements are also not considered to be a hazard at the site. (Leighton, 2019a)

Seismically-induced settlement consists of dynamic settlement of unsaturated soil (above groundwater) and liquefaction-induced settlement (below groundwater). These settlements occur primarily within low density sandy soil due to reduction in volume during and shortly after an earthquake event. Based the Geotechnical Report, the Project site is predominantly underlain by fine-grained sedimentary bedrock. These materials are generally not considered to be susceptible to seismically induced settlement; therefore, the potential for seismically-induced settlement is not a significant consideration for development (Leighton, 2019a).

Therefore, potential impacts related to seismic-related ground failure, including liquefaction would be less than significant and no mitigation is required.

a.iv) *Landslides?*

Less than Significant with Mitigation Incorporated. Based on the State of California Seismic Hazard Zones Map for the San Juan Capistrano Quadrangle, the Project site is not located within an area that has been identified by the State of California as being potentially susceptible to seismically induced landslides (refer to Figure 4, Seismic Hazard Map of Geotechnical Report of Appendix D). Based on the State of California Seismic Hazard Zones Map for the San Juan Capistrano Quadrangle, the Project site is not located within an area that has been identified by the State of California as being potentially susceptible to seismically induced landslides (refer to Figure 4, Seismic Hazard Map, provided in the Geotechnical Report in Appendix D). However, based on the subsurface geotechnical conditions at the Project site, and the previous remedial grading that has occurred, the potential for seismically induced landslides to occur at the site is considered low (Leighton, 2019a). In consideration of the proposed subterranean parking, a slope stability analysis was performed as part of the Project (refer to the discussion under Threshold c). As discussed, there is a potentially significant impact due to the factor of safety for the earthen buttress



being less than the required minimum value. To address slope stability, the Geotechnical Report recommends a retaining wall be installed. With adherence to the recommendations in the Geotechnical Report, as required by MM GEO-1, and incorporation of the retaining wall into the Project (refer to the preliminary grading plan provided on Figure 2-10), the potential for a seismically induced landslide is reduced to a level considered less than significant.

b) *Would the Project result in substantial soil erosion or the loss of topsoil?*

Less than Significant Impact. Under existing conditions, the western portion of the Project site is developed and there is limited landscaping; the eastern portion of the Project site is an engineered landscaped slope. During construction activities, 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.

The erosion characteristics of the existing artificial fill materials exposed on any future potential temporary cut slopes onsite are expected to be moderately susceptible to erosion. These materials would be particularly prone to erosion during excavation and site development, especially during heavy rains. The potential for erosion can be alleviated through compliance with the current statewide National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities adopted by the State Water Resources Control Board (SWRCB), as further discussed in the Hydrology and Water Quality section of this IS/MND. Notably, application of Storm Water Pollution Prevention Plan (SWPPPs) measures, such as temporary catchment basins and/or sandbagging to control runoff and contain sediment transport within the Project site during construction would be required.

Following completion of the Project, the site would be improved with structures, hardscape, landscaping, and appropriate drainage infrastructure. The required Project-specific Preliminary Water Quality Management Plan (WQMP) included in Appendix H of this IS/MND identifies an effective combination of erosion control and sediment control measures (i.e., best management practices [BMPs]) to reduce or eliminate sediment discharge to surface water from stormwater and non-stormwater discharges. Compliance with the Project-specific WQMP would be required as a condition of Project approval (refer to RR WQ-2) and long-term maintenance of on-site water quality features is required. Therefore, the Project would not result in substantial erosion or loss of top soil during long-term operation.

Therefore, sedimentation and erosion impacts during construction and operation would be less than significant with adherence to applicable regulations and no mitigation is required (Leighton, 2019a).

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. Based on the results of soil borings conducted at the Project site (further discussed in the Geotechnical Report included in Appendix D), the buildable area of the site is underlain by previously placed artificial fill. Beneath the artificial fill, Tertiary age Capistrano Formation (siltstone facies) bedrock was encountered. The placement of the artificial fill was documented under the observation of a qualified geologist. The approximate depth of artificial fill ranges between approximately 3 and 15 feet based on the subsurface exploration. The deepest fill encountered (15 feet)



is located within the front-cut of the buttress fill key at the base of the slope along the eastern edge of the Project site (Leighton, 2019a).

The eastern portion of the Project site and adjacent area off-site to the east consist of an ascending engineered fill slope rising at a gradient of approximately 1.5:1 to 1.8:1 (horizontal: vertical) from the parking lot at the eastern portion of the Project site to the Saddleback College property (elevation of 259 feet amsl to 340 feet amsl offsite). The slope was constructed as part of a greater buttress system to mitigate unfavorable geologic conditions that are prevalent in the Capistrano Formation bedrock. There is a buttress fill key estimated to be 20-feet deep and 30-feet wide constructed to support the eastern slope (Leighton, 2019a). The Geotechnical Investigation performed for the Project included a slope stability analysis to evaluate the overall (i.e., global) stability of the buttressed slope. The global stability of the slope satisfies minimum factor of safety (FS) for static ($FS \geq 1.5$) and pseudo static ($FS \geq 1.1$) conditions as required by the local building code. However, analysis focused solely on the earthen buttress indicates the calculated FS (1.35) is less than the minimum value required by code. The calculated FS is further reduced by excavation of the subterranean level, resulting in a potentially significant impact. The Project includes a soldier pile retaining wall (up to 19 feet high) at the eastern slope as recommended in the Geotechnical Report to reduce this impact to a less than significant level. MM GEO-1 requires implementation of the recommendations identified in the Geotechnical Report.

Concrete in contact with the near surface onsite soil is expected to have severe exposure to water-soluble sulfates and low exposure to chloride in the soil. The onsite soil is very severely corrosive to buried ferrous metal. Based on the test results, ferrous pipes buried in moist to wet site earth materials should be avoided by using high-density polyethylene (HDPE), polyvinyl chloride (PVC) and/or other non-ferrous pipe when possible provided the pipe walls possess sufficient strength for the embedment and external loading to which the pipe would be subjected. Ferrous pipe can also be protected to separate pipe from on-site soils. If buried ferrous pipes are used, consistent with the recommendations in the Geotechnical Report, which are required to be implemented by MM GEO-1, further corrosivity testing of soil samples would be performed and specific corrosion protection measures recommended.

As previously discussed under Threshold a.ii, the Project site is not located within an area that has been identified by the State of California as being potentially susceptible to liquefaction and the potential for liquefaction to occur at the site is negligible.

There would be less than significant impacts related to unstable soils with adherence to the CBC and City Building Code and 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 significant amounts of clay particles that swell considerably when wetted and shrink when dried. The Geotechnical Report determined that the soils overlying the bedrock consist predominantly of silty clay to clayey silt derived from the onsite Capistrano Formation and therefore, the site's expansion potential is high to very high. The expansion Index (EI) testing on a bulk sample of near surface soils (upper 5 feet) collected from one boring indicated an EI value of 130. The Geotechnical Report indicates that given the relatively uniform nature of the subsurface materials, design plans should take into account the high potential for expansion.



Upon completion of grading and exposure of subgrade, additional expansion testing is recommended to confirm the values presented in the Geotechnical Report. (Leighton, 2019a)

As required by MM GEO-1, Project design and implementation would comply with the design recommendations of the Geotechnical Report. Therefore, with implementation of recommendations in the Geotechnical Report, potentially significant impacts related to expansive soils on the Project site would be reduced to a less than significant level.

e) *Would the project have soils incapable of adequately supporting the use septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

No Impact. No septic tanks or alternative waste water disposal systems would be utilized by the Project or are proposed as part of the Project; accordingly, no impact due to soils incapable of supporting such systems would occur. Mitigation is not required.

f) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Less than Significant Impact with Mitigation Incorporated. According to the Paleontological Assessment, the Project site is underlain by the siltstone facies of the upper Miocene Capistrano Formation in the west and by the Pliocene Niguel Formation in the east. Both the Capistrano and Niguel Formations have a high paleontological sensitivity, and the potential to contain fossils. The Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County (LACM) performed a literature review and collections and records search for BFSAs for the Project. LACM indicated that, while no fossils are known from within the Project site boundaries, any excavation into the Niguel and Capistrano Formations, as well as potential older Quaternary deposits, may encounter significant vertebrate fossils. Vertebrate fossils from the Niguel Formation in the vicinity of the Project site include remains from great white shark, sea lion, sea cow, and whale. Mammalian fossils from the Capistrano Formation in the vicinity of the Project site include whale and porpoise remains, as well as those from sharks and bony fish, and an extinct species of auklet, a marine bird. (BFSAs, 2019b)

Therefore, the excavation activity proposed as part of the Project's construction, which would reach to depths of up to 20 feet bgs, could encounter paleontological resources, resulting in a potentially significant impact. MM GEO-2 requires that a professional paleontologist be retained to monitor of mass grading activities in undisturbed Capistrano and Niguel Formation sediments to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. Monitoring is recommended full time starting at the surface, where the Capistrano and Niguel Formations are exposed, and when exposed below the young alluvial sediments along the west edge of the Project site, during earth disturbance activities. Paleontological monitoring of the young alluvial sediments present along the western edge of the Project site is not recommended; however, monitoring is recommended for any potentially fossiliferous, older Pleistocene alluvial sediments that may underlie the young alluvium. In addition, monitoring of the overlying fill materials is not warranted. MM GEO-2 also identifies actions to be taken if paleontological resources are discovered. With implementation of MM GEO-2, impacts to potential nonrenewable paleontological resources (fossils), if present, would be reduced to a less than significant level.



Mitigation Measures

MM GEO-1 Prior to issuance of grading permits, grading plan review shall be conducted by the Director of the Mission Viejo Community Development Department, or designee, to verify that recommendations/requirements specified in the *Geotechnical Exploration Report, Proposed Senior Housing Development*, prepared by Leighton and Associates in July 2019 (included in Appendix D of this IS/MND), have been appropriately incorporated into final Project design. These Project-specific design recommendations include, but are not be limited to the following:

- Earthwork
- Foundation Design
- Slab-on-Grade Floors
- Temporary Excavations
- Trench Backfill
- Cement Type
- Corrosion Protection Measures
- Surface Drainage
- Concrete Flatwork
- Pavements
- Earth Retaining Structures
- Soldier Pile Buttress
- Drilled Pier Construction Considerations
- Exterior Concrete Flatwork
- Additional Geotechnical Services

Design, grading, and construction shall be performed in accordance with the requirements of the City of Mission Viejo Building Code and the California Building Code (CBC) applicable at the time of grading, appropriate local grading regulations, and the recommendations of the geotechnical consultant as summarized in the Geotechnical Report.

MM GEO-2 Prior to issuance of a grading permit, the Project Applicant shall retain a professional paleontologist to verify implementation of the mitigation measures below identified in the Paleontological Assessment, prepared by Brian F. Smith and Associates, dated July 8, 2019, and included in Appendix E of this IS/MND. Selection of the paleontologist shall be subject to the approval of the City of Mission Viejo Community Development Director and no grading activities shall occur at the site until the paleontologist has been approved by the City.

- Monitoring of mass grading and excavation activities in areas identified as likely to contain paleontological resources by a qualified paleontologist or paleontological monitor shall be conducted. Monitoring shall be conducted in areas of grading or excavation in undisturbed Miocene Capistrano Formation and the Miocene Capistrano Formation (TCs and Tn on the Figure 3 of the Paleontological Assessment, respectively), as well as where over-excavation of surficial alluvial sediments shall encounter these formational sediments in the



subsurface. Monitoring is not required for artificial fill materials or the Pleistocene/Holocene young sandy axial channel deposits (Qya_a in Figure 3 of the Paleontological Assessment). However, monitoring of the Pleistocene very old sandy axial channel deposits (Qvoa_a in Figure 3 of the Paleontological Assessment) is required, should these deposits underlie the young channel deposits. Paleontological monitors shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediment that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources.

- Preparation of recovered specimens to a point of identification and permanent preservation (not display), including screen-washing of sediments to recover small invertebrates and vertebrates, if necessary.
- Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage (e.g., the Cooper Center in Santa Ana, Orange County, California). The paleontological program should include a written repository agreement prior to the initiation of mitigation activities. The Lead Agency may select another repository if it so desires.
- Preparation of a final monitoring and mitigation report of findings and significance, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location. The report, when submitted to, and accepted by, the City of Mission Viejo, will signify satisfactory completion of the Project program to mitigate impacts to any potential non-renewable paleontological resources (i.e., fossils) that might have been lost or otherwise adversely affected without such a program in place.



3.4.8 Greenhouse Gas Emissions

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
<i>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following analysis is based on the MorningStar Senior Living Greenhouse Gas Analysis (GHG Analysis), prepared by Urban Crossroads (November 2, 2019) (Urban Crossroads, 2019c), which is included in its entirety in Appendix F of this IS/MND.

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. Many scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth’s atmosphere, CO₂ (carbon dioxide), N₂O (nitrous oxide), CH₄ (methane), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride. Many scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural “greenhouse gas” effect, the earth’s average temperature would be approximately 61° Fahrenheit cooler than it is currently. The cumulative accumulation of these gases in the earth’s atmosphere is the cause for the observed increase in the earth’s temperature. The effects of climate change in California related to public health, water resources, agriculture, forests and landscapes, rising sea levels, and human health are described in Section 2.5 of the GHG Analysis included in Appendix F of this IS/MND (Urban Crossroads, 2019c).

An individual project like the Project cannot generate enough GHG emissions to affect a discernible change in global climate. However, the Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, the GHG Analysis evaluates the potential for the Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect (Urban Crossroads, 2019c).

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

Less than Significant Impact. The City of Mission Viejo has not adopted its own numeric threshold of significance for determining impacts with respect to GHG emissions. A screening threshold of 3,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year to determine if additional analysis is required is an



acceptable approach for small projects. This approach is a widely accepted screening threshold used by numerous cities in the SCAB and is based on the SCAQMD staff’s proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD’s Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans (SCAQMD Interim GHG Threshold), as described in Section 2.7 of the GHG Analysis included in Appendix F of this IS/MND. The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required.

As previously identified in Section 3.4.1, Air Quality, of this IS/MND, the latest version of CalEEMod has been used to determine GHG emissions resulting from the Project. Output from the model runs for construction and operational activity are provided in Appendices 3.1 through 3.3 of the GHG Analysis included in Appendix F. The CalEEMod model includes GHG emissions from the following source categories: construction (amortized over a 30-year period and added to the annual operational phase GHG emissions); area; energy (combustion emissions associated with natural gas and electricity); mobile sources (vehicles); on-site equipment; water supply, treatment, and distribution; solid waste; and station sources (including an emergency generator and compressed natural gas-powered boiler). A detailed discussion of modeling assumptions is provided in the GHG Analysis in Appendix F.

The annual GHG emissions associated with the operation of the Project are estimated to be 1,558.24 MTCO₂e per year as summarized in Table 3-9.

Table 3-9 Project Greenhouse Gas Emissions

Emission Source	Emissions (metric tons per year)			
	CO ₂	CH ₄	N ₂ O	Total CO ₂ E
Annual construction-related emissions amortized over 30 years	22.68	0.00	0.00	22.76
Area Source	33.93	2.77e-03	5.80e-04	34.17
Energy Source	344.68	0.01	3.68e-03	346.08
Mobile Sources	601.10	0.03	0.00	601.72
Stationary Sources	424.54	0.01	0.00	424.75
Waste	24.45	1.45	0.00	60.57
Water Usage	59.01	0.28	7.09e-03	68.19
Total CO₂E (All Sources)	1,558.24			
Existing Emissions	1,400.23			
Net Emissions (Project – Existing)	98.62			

Note: CalEEMod model output, See Appendices 3.1 through 3.2 of the GHG Analysis in Appendix F for detailed model outputs. (Urban Crossroads, 2019c)

The Project would result in approximately 956.52 MTCO₂e per year from construction, area, energy, stationary source, waste, and water usage. In addition, the Project has the potential to result in an additional 601.72 MTCO₂e per year from mobile sources if the assumption is made that all the vehicle trips to and from the Project are “new” trips resulting from the development of the Project. The GHG emissions from existing uses at the Project site are subtracted from the Project-related GHG emissions. The total net GHG emissions would be slightly increased by 98.62 MTCO₂e per year. As such, the Project’s



GHG emissions would not increase significantly in comparison to the existing development, and would be less than the 3,000 MTCO₂e per year screening threshold and would not have a significant direct or indirect impact on GHG and climate change. No mitigation is required. (Urban Crossroads, 2019c)

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

No Impact. The GHG Emissions Analysis included in Appendix F includes a detailed discussion of international, federal, State, and regional plans, policies, and regulations addressing the reduction of GHG emissions. Furthermore, the Project's GHG Emissions Analysis identifies mandates imposed by the State and SCAQMD aimed at the reduction of air quality emissions, including those that would also assist in the reduction of GHG emissions.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the Assembly Bill (AB) 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. The Project would comply with a number of regulations that would reduce GHG emissions as identified in Section 2.7 of the GHG Analysis; however, a majority of the regulations are subsets of AB 32 (2008 Scoping Plan Consistency) and SB 32 (2017 Scoping Plan Consistency). As such, the Project's consistency with AB 32, SB 32, and the City's SAP are discussed below. (Urban Crossroads, 2019c)

Assembly Bill 32 and 2008 CARB Scoping Plan

The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. The CARB is the state agency charged with monitoring and regulating sources of GHGs. CARB approved the 1990 GHG emissions level of 427 MMTCO₂e on December 6, 2007. Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO₂e. Emissions in 2020 in a "business as usual" (BAU) scenario were estimated to be 596 MMTCO₂e, which do not account for reductions from AB 32 regulations. At that level, a 28.4 percent reduction was required to achieve the 427 MMTCO₂e 1990 inventory. In October 2010, CARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 MMTCO₂e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by CARB for 2000 through 2012. The State has achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 MMTCO₂e (AB 32 2020 target)
- 2000: 463 MMTCO₂e (an average 8 percent reduction needed to achieve 1990 base)
- 2010: 450 MMTCO₂e (an average 5 percent reduction needed to achieve 1990 base)

CARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, CARB revised the 2020 BAU inventory forecast to account for new



lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4 percent and the latest reduction from 2020 BAU is 21.7 percent.

- 2020: 545 MMTCO₂e BAU (an average 21.7 percent reduction from BAU needed to achieve 1990 base) (Urban Crossroads, 2019c)

CARB's 2008 Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32. The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

CARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. The Update does not set new targets for the State but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050.

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the amount of reductions California must achieve to return to the 1990 emissions level by 2020 as required by AB 32. The no-action scenario is known as "business-as-usual" or BAU. As previously identified, the CARB 2020 BAU Projection for GHG emissions in California was originally estimated to be 596 MMTCO₂e. The updated CARB 2020 BAU Projection is 545 MMTCO₂e. Considering the updated BAU estimate of 545 MMTCO₂e by 2020, CARB estimates a 21.7 percent reduction below the estimated statewide BAU levels is necessary to return to 1990 emission levels (i.e., 427 MMTCO₂e) by 2020, instead of the approximate 28.4 percent BAU reduction previously reported under the original Climate Change Scoping Plan (2008). (Urban Crossroads, 2019c)



Project Consistency Analysis

Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the Project, such as energy efficiency. Finally, while some measures are not directly applicable, the Project would not conflict with their implementation. Reduction measures are grouped into 18 action categories as shown in Table 3-10, 2008 Scoping Plan Consistency Summary. Table 3-10 includes an assessment of the Project’s consistency with the 2008 Scoping Plan. As summarized, the Project would not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories through energy efficiency, water conservation, recycling, and landscaping.

Table 3-10 2008 Scoping Plan Consistency Summary

Action	Supporting Measures	Consistency
Cap-and-Trade Program	--	Not Applicable. These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect residential projects.
Light-Duty Vehicle Standards	T-1	Not Applicable. This is a statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	Consistent. The Project would include a variety of building, water, and solid waste efficiencies consistent with current CALGreen requirements.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	Not Applicable. Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	Not Applicable. Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related GHG Targets	T-3	Not Applicable. This is a statewide measure and is not within the purview of this Project.
Vehicle Efficiency Measures	T-4	Not Applicable. Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	Not Applicable. Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are yet to be implemented and will be voluntary, the Project would not interfere with their implementation.
	T-6	
Million Solar Roofs (MSR) Program	E-4	Consistent. The MSR program sets a goal for use of solar systems throughout the state as a whole. The Project would be consistent with the current Title 24 standards which require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities,



Action	Supporting Measures	Consistency
		encourage demand responsive technologies for residential buildings, update indoor and outdoor lighting for nonresidential buildings. As such, the Project would be consistent with this action.
Medium- & Heavy-Duty Vehicles	T-7	Not Applicable. MD and HD trucks and trailers working from the industrial uses are subject to aerodynamic and hybridization requirements as established by CARB; no feature of the Project would interfere with implementation of these requirements and programs.
	T-8	
Industrial Emissions	I-1	Not Applicable. These measures are applicable to large industrial facilities (> 500,000 MTCO ₂ e/yr) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	Not Applicable. Supports increased mobility choice.
Green Building Strategy	GB-1	Consistent. The Project will include a variety of building, water, and solid waste efficiencies consistent with current CALGreen requirements.
High Global Warming Potential Gases	H-1	Not Applicable. The Project is not a substantial source of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	Consistent. The Project will be required recycle a minimum of 50 percent from construction activities and operations per State and City requirements.
	RW-2	
	RW-3	
Sustainable Forests	F-1	Consistent. The project will increase carbon sequestration by increasing on-site trees per the project landscaping plan.
Water	W-1	Consistent. The Project will include use of low-flow fixtures and efficient landscaping per State requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	Not Applicable. The Project is not an agricultural use.

Note: Supporting measures can be found at the following link: http://www.arb.ca.gov/cc/scopingplan/2013_update/appendix_b.pdf (Urban Crossroads, 2019c)

Senate Bill 32/2017 Climate Change Scoping Plan Update

In November 2017, CARB released the final 2017 Scoping Plan Update, which identifies the State’s post-2020 reduction strategy. The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by Senate Bill 32 (SB 32). Key programs



that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO₂e for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

California's climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero-emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries will further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources.

In addition to the statewide strategies listed above, the 2017 Scoping Plan also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 MTCO₂e or less per capita by 2030 and 2 MTCO₂e or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or, a performance-based metric using a climate action plan or other plan to reduce GHG emissions is appropriate. (Urban Crossroads, 2019c)

According to research conducted by the Lawrence Berkeley National Laboratory and supported by CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. (Urban Crossroads, 2019c)

Project Consistency Analysis

The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Table 3-11 summarizes the Project's consistency with the 2017 Scoping Plan. As summarized, the Project would not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories. Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030 (Urban Crossroads, 2019c).



Table 3-11 2017 Scoping Plan Consistency Summary

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50 percent of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	Consistent. This measure is not directly applicable to development projects, but the Project would use energy from SDG&E, which has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. Although this measure is directed towards policymakers, the Project would be designed and constructed to implement the energy efficiency measures for new commercial developments and would include several measures designed to reduce energy consumption.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly-owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		Consistent. The Project would be designed and constructed to implement the energy efficiency measures, where applicable by including several measures designed to reduce energy consumption. The Project includes energy efficient lighting and fixtures that meet the current Title 24 Standards throughout the Project Site and would be a modern development with energy efficient boilers, heaters, and air conditioning systems.
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	Consistent. These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards will comply with the strategy.
At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.		Consistent. These are CARB enforced standards; vehicles that access the Project that are required to comply with the standards will comply with the strategy.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Not Applicable. This measure is not within the purview of this Project.
Medium- and Heavy-Duty GHG Phase 2.		Not Applicable. This measure is not within the purview of this Project.



Action	Responsible Parties	Consistency
<p>Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_x standard.</p>		<p>Not Applicable. This measure is not within the purview of this Project.</p>
<p>Last Mile Delivery: New regulation that would result in the use of low NO_x or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.</p>		<p>Not Applicable. This measure is not within the purview of this Project.</p>
<p>Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document “Potential VMT Reduction Strategies for Discussion.”</p>		<p>Not Applicable. This measure is not within the purview of this Project.</p>
<p>Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).</p>	<p>CARB</p>	<p>Not Applicable. The Project is not within the purview of SB 375 and would therefore not conflict with this measure.</p>
<p>By 2019, adjust performance measures used to select and design transportation facilities</p>		
<p>Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).</p>	<p>CalSTA, SGC, OPR, CARB, Governor’s Office of Business and Economic Development (GO-Biz), California Infrastructure and Economic</p>	<p>Not Applicable. Although this is directed towards CARB and Caltrans, the Project would be designed to promote and support pedestrian activity on-site and in the Project Site area. The Project Site is within proximity to residential neighborhoods.</p>



Action	Responsible Parties	Consistency
	Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC, CARB	Not Applicable. This measure is not within the purview of this Project.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	Not Applicable. These measures are not within the purview of this Project.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18 percent.	CARB	Not Applicable. This measure is not within the purview of this Project.
Implement the Short-Lived Climate Pollutant Strategy by 2030		
40 percent reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	Not Applicable. These measures are not within the purview of this Project.
50 percent reduction in black carbon emissions below 2013 levels.		
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA SWRCB, Local Air Districts	Not applicable. Although this measure is directed towards policymakers, as further discussed in the Utilities and Service Systems section of this IS/MND, the Project would comply with AB 939, which sets a statewide policy regarding solid waste generation. Additionally, the Project would



Action	Responsible Parties	Consistency
		be required to have a recycling program and recycling collection. During construction, the Project would recycle and reuse construction and demolition waste per City requirements.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	Not Applicable. This measure is not within the purview of this Project.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California’s land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	Not Applicable. This measure is not within the purview of this Project.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity		Not Applicable. This measure is not within the purview of this Project.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		Not Applicable. This measure is not within the purview of this Project.
Establish scenario projections to serve as the foundation for the Implementation Plan		Not Applicable. This measure is not within the purview of this Project.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	Not Applicable. This measure is not within the purview of this Project.
Implement Forest Carbon Plan	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	Not Applicable. This measure is not within the purview of this Project.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	Not Applicable. This measure is not within the purview of this Project.

(Urban Crossroads, 2019c)



City of Mission Viejo Sustainability Action Plan

The City of Mission Viejo Sustainability Action Plan (SAP) is a comprehensive document to ensure that the City reduces community-wide GHG emissions consistent with AB 32 and Executive Order S-3-05. The SAP was adopted in March 2013 and serves as the City's primary information and policy document for GHG emissions reductions to analyze and reduce potentially significant GHG emissions. The SAP identifies only voluntary GHG reduction measures that would apply to different types of future projects. The six measures listed in the SAP are discussed below, along with an assessment of the Project's consistency with the SAP measures.

Measure 1 - Urban Forestry. Enhance the urban forest at the project site or provide funds to the City urban reforestation program.

Consistent: As shown in Figure 2-8, Conceptual Landscape Plan, the Project includes planting of numerous trees and shrubs within the Project site.

Measure 2 - Water Efficiency. Reduce water consumption in new development by 20 percent through low-flush toilets, landscape ordinance, incentive programs, on-site storm water capture, and other similar programs.

Consistent: The Project would utilize water fixtures that are sold in California that are required to meet CCR Title 20, Section 1601 – 1608 that requires all water fixtures to be low flow and provide an average water reduction of 30 percent.

Measure 3 - Clean & Efficient Energy. Increase energy efficiency in new development beyond 2008 Title 24 standards.

Consistent: The Project would be required to meet the 2019 Title 24 standards which provide up to 53 percent greater efficiency than the 2016 Title 24 standards.

Measure 4 - Solid Waste Reduction. Implement construction waste diversion of at least 75 percent.

Consistent: In September 2004, the City Council adopted a Construction and Demolition Ordinance that requires demolition and construction projects greater than 250 square feet to divert a minimum of 75 percent of debris from the landfill. As further discussed in the Utilities and Service Systems section of this IS/MND, the Project would comply with the Ordinance and would divert a minimum of 75 percent of construction debris from the landfill system.

Measure 5 - Alternative Transportation. The alternative transportation measure encourages carpooling, walking, and bicycling as viable transportation modes to decrease the need to drive.

Consistent: The Project represents an infill development within an existing suburbanized area. The Project would also be required to support electric vehicle charging consistent with CAIGreen requirements which promotes residents, employees, and visitors seeking choices for alternative modes of transport. (Urban Crossroads, 2019c)



Measure 5 – Traffic Management. The coordination of signals along arterial roadways will reduce vehicle idling and reduce fuel consumption.

Not Applicable: Signal coordination is not within the purview of an individual project. However, the City implements appropriate signal coordination, as necessary, and as directed by the City's Engineering and Public Works departments.

In summary, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. No impact would result and no mitigation measures are required.

Mitigation Measures

Implementation of the Project would result in less than significant impacts related to GHG emissions; therefore, no mitigation measures are required.



3.4.9 Hazards and Hazardous Materials

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) <i>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) <i>Be located on a site which is included on a list of hazardous materials sites which complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) <i>For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) <i>Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) <i>Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Requirement

RR HAZ-1 Demolition and renovation activities shall be conducted in accordance with the remediation and mitigation procedures established by federal, State, and local standards including, but not limited to, the Federal and State Occupation Safety and Health Administrations (OSHA and CalOSHA, respectively) and South Coast Air Quality Management District (SCAQMD) regulations for the excavation, removal, and proper disposal of the asbestos containing materials. The materials shall be disposed of at a certified asbestos landfill. The Asbestos-Abatement Contractor shall comply with notification and asbestos-removal procedures outlined in SCAQMD’s Rule 1403 to reduce asbestos-related health risks. SCAQMD Rule



1403 applies to any demolition or renovation activity and the associated disturbance of asbestos containing materials. These requirements shall be included on the contractor specifications and verified by the Community Development Director, or designed, in conjunction with the issuance of a demolition permit.

RR HAZ-2 Contractors shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1532.1, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to lead. Lead-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.

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

Less than Significant Impact. The transport, use, and handling of hazardous materials on the Project site during construction is a standard risk on all construction sites, and there would be no greater risk than would occur on any other similar construction site. Heavy equipment (e.g., dozers, excavators) would operate on the Project site during construction. Heavy equipment is typically fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which is considered hazardous if improperly stored or handled. In addition, materials such as paints, adhesives, solvents, and other substances typically used in building construction would be located on the Project site during construction. Improper use, storage, or transportation of hazardous materials can result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. Construction contractors would be required to comply with all applicable federal, State, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including but not limited to requirements imposed by the EPA, California Department of Toxic Substances Control (DTSC), SCAQMD, Regional Water Quality Control Board (RWQCB), and the City of Mission Viejo. With mandatory adherence to applicable hazardous materials regulations, the Project would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials during the construction phase. Impacts would be less than significant.

The Project involves construction of a 166,000-sf structure with three-levels above ground and one subterranean parking level in the previously developed portion of the Project site. Up to 132 units would be provided for Assisted Living, and Memory Care. Consistent with existing use at the Project site and in the vicinity, once constructed, the Project would use hazardous materials primarily for maintenance activities, including for maintenance of the proposed buildings, swimming pool, and other site improvements. Congregate care/assisted living uses typically do not present a hazard associated with the accidental release of hazardous substances into the environment because the community residents are not anticipated to use, store, dispose, or transport large volumes of hazardous materials. Hazardous substances associated with operations are typically limited in both amount and use such that they can be contained without impacting the environment. Routine maintenance activities for the Project may include the storage and use of hazardous materials such as cleansers, solvents, pesticides, pool cleaning supplies, paint, fertilizers, and similar materials. Additionally, some medicines and medical supplies would also be used on-site, of limited type and quantity. These materials would be in limited quantities that, when used correctly and in compliance with existing laws and regulations, including Chapter 6.30, Hazardous Materials Disclosure, of the City's Municipal Code, would not result in a significant hazard to people in the vicinity of the Project.



No manufacturing, industrial, or other uses utilizing large amounts of hazardous materials would occur within the Project site. Typical use of household hazardous materials and medical supplies would not generally result in the transport, disposal, or release of hazardous materials in an amount that would create a significant hazard to the public or environment. With adherence to applicable regulations, operation of the Project would result in a less than significant impact related to a significant risk to the public or the environment through the potential routine transport, use, or disposal of hazardous materials. No mitigation is required.

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?

Less than Significant Impact.

Hazardous Materials

This section summarizes the Phase I Environmental Site Assessment (ESA) (July 3, 2019) and Phase II ESA (May 20, 2019) prepared for the Project by Leighton and Associates, Inc. (Leighton, 2019b) and (Leighton, 2019c), and included in Appendix G of this IS/MND. The Phase I ESA addresses the entire Project site and surrounding property. The purpose of the Phase I ESA is to evaluate the property for potential Recognized Environmental Concerns (RECs)¹ that may be present, historical RECs (HRECs)², or controlled RECs (CRECs)³ that may impact the Project site. The Phase I ESA included a site visit, records review, and interviews.

Based on the findings of the Phase I ESA, the Project site was listed in the California Hazardous Waste Manifest (HAZNET) database maintained by the Department of Toxic Substances Control (DTSC). According to the Environmental Data Resources, Inc. (EDR) database report, the Project site is listed as having disposed of hazardous materials, including but not limited to photochemicals, photoprocessing waste, waste oil, and mixed oil. However, no release(s) associated with the hazardous wastes were noted for the Project site addresses. The Project site was also listed as “Sundwrenched Motor Werks” in the Facility Index System (FINDS) maintained by the Environmental Protection Agency (EPA); but no additional information was provided. These uses are considered RECs associated with the Project site; no HRECs or CRECs were identified. With respect to off-site property, the EDR database report identifies that two drycleaners and an automotive repair shop operate, or have operated, in proximity adjacent to the south of the Project site. The two drycleaners operated from at least 1991 until 2012 at the addresses of 28592 and 28601 Marguerite Parkway. An automotive repair shop has operated from at least 1994 to the present at the address of 26371 Avery Parkway. Incidental, undocumented releases of chemicals used in these types of businesses, specifically petroleum hydrocarbons and perchloroethylene (PCE, a dry-cleaning solvent), is probable and could potentially impact the Project site; therefore, these properties are

¹ RECs are defined, according to American Society for Testing and Materials (ASTM) E1527-13 as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not RECs”.

² HRECs are defined as “a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.”

³ CRECs are defined as “a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.”



considered offsite RECs and potential vapor encroachment concerns. The remaining listings identified in the EDR database report were reviewed and not interpreted to represent an adverse effect to the Project site at the time the Phase I ESA was prepared based on one or more of the following: type of release (soil only), closure received from regulatory agency, distance of the facility to the Project site; and, direction of groundwater flow (south-southwest) and location of the facility to the Project site (cross-gradient or down-gradient). (Leighton, 2019b)

Based on review the Vapor Encroachment Screen (VES) produced using EDR's Vapor Encroachment Worksheet, due to the historical use of the Project site as a printing facility (which used photoprocessing chemicals) and an automotive repair shop (which uses, or potentially has used, solvents and other petroleum products), vapor encroachment/intrusion is considered a concern associated with the Project site. Additionally, the three offsite facilities with potential vapor encroachment concerns were identified in the EDR database report and other historical records. (Leighton, 2019b)

During the site reconnaissance, various hazardous substances, drums, and other chemical containers were observed at the Project site along with an elevator with hydraulic operating equipment; however, no staining was observed with these items. There is a pad-mounted transformer in the eastern parking lot; however, no leaks or stains were observed on the concrete pad. (Leighton, 2019b)

Due to the identification of RECs at the site and off-site RECs, the Phase I ESA recommended the completion of the Phase II ESA consisting of soil and soil gas sampling to determine if historic onsite or offsite businesses have adversely impacted the Project site. As further described in the Phase II ESA in Appendix G of this IS/MND, 8 soil borings were advanced to depths between 8- and 10-feet, and soil samples were collected at various intervals for chemical analysis. The soil gas survey involved the installation of nested soil gas probes at depths between 5 and 12 feet. The soil analytical results indicated that three VOCs (1,2,4-Trimethylbenzene; 1,35-Trimethylbenzene, and methylene chloride) were detected in soil samples collected from two borings. Four VOCs (m, p-Xylenes; 1,2,4-Trimethylbenzene; p-Isopropyltoluene; and PCE) were detected in soil gas samples. However, as identified in the Phase II ESA, detected VOCs were well below the respective established residential use screening criteria. Based on the results of the Phase II ESA, no impacts to soil and soil gas were identified that would pose an adverse risk to future occupants of the Project site. Accordingly, no significant impacts associated with the accidental release of hazardous materials would occur. This impact is less than significant and no mitigation is required.

Building Materials

Based on the age of the existing building, which was constructed in 1973, a survey was conducted to determine if any asbestos, lead, or universal waste materials are present. The survey was conducted by Health Sciences Associates (HSA) in May 2018 (HSA Report) and the results are presented in the report included in Appendix G of this IS/MND (HSA, 2018). The HSA Report involved the identification of the following types of materials, if present:

- Asbestos-containing materials (ACMs);
- Asbestos-containing construction materials (ACCMs);
- Lead-containing paint (LCP) and lead-based paint (LBP);
- Polychlorinated biphenyls (PCB)-containing light ballasts, tritium-containing exit signs, and other possible universal wastes, such as light fixtures and mercury containing thermostats



Asbestos, a naturally occurring fibrous material, was used for years in many building materials for its fire-proofing and insulating properties. While the use of asbestos in the manufacture of most building materials has not been fully prohibited by law, the use of asbestos, for the most part, has voluntarily been discontinued since the late 1970s. Loose insulation, ceiling panels, and brittle plaster are potential sources of friable (easily crumbled) asbestos. Nonfriable asbestos is generally bound to other materials such that it does not become airborne under normal conditions. Any activity that involves cutting, grinding, or drilling during demolition can release friable asbestos fibers unless proper precautions are taken. Inhalation of airborne fibers is the primary mode of asbestos entry into the body, which makes friable materials the greatest potential health risk.

Asbestos is a known human carcinogen and there is no known threshold level of exposure at which adverse health effects are not anticipated. Given this, the U.S. Environmental Protection Agency (USEPA) and CalEPA have identified asbestos as a hazardous air pollutant pursuant to Section 12 of the Federal Clean Air Act. Further, CARB has identified asbestos as a toxic air contaminant (TAC) pursuant to the California Health and Safety Code (Section 39650 et seq.). If the total amount of ACM or ACCM to be abated is equal to or greater than 100 sf, compliance with various local, State, and federal regulations is required, as described in the HSA Report included in Appendix G of this IS/MND. These regulations include, but are not limited to: SCAQMD Rule 1403 (requires SCAQMD notification); Labor Code 6501.5 (requires the use of a state-certified and registered asbestos abatement contractor); Federal Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101, California Code of Regulation (CCR) Title 8 § 1529 and § 5208 (require employers to monitor the exposure of their employees who may be exposed to asbestos); and EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61, Subpart M (requires the inspection for ACMs prior to any planned renovation or demolition of a building).

Lead is a naturally occurring metallic element. Among its numerous uses and sources, lead can be found in paint; water pipes, solder in plumbing systems; and structures painted with LBP. In 1978, the Consumer Products Safety Commission banned paint and other surface coating materials containing lead. Because of its toxic properties, lead is regulated as a hazardous material. Inorganic lead is also regulated as a TAC. Regulations applicable to lead are also discussed in the HSA Report included in Appendix G of this IS/MND and primarily relate to defining regulatory standards and hazards associated with occupied buildings.

In California, lead and asbestos abatement must be performed and monitored by contractors with appropriate certifications from the California Department of Health Services (DHS). In addition, CalOSHA has regulations to protect worker safety during potential exposure to lead and asbestos under Title 8 of the California Code of Regulations (Section 1529, Asbestos and Section 1532.1, Lead). Demolition that could result in the release of asbestos and lead must be conducted according to CalOSHA standards. These standards were developed to protect the general population and construction workers from respiratory and other hazards associated with exposure to these materials. Young children, the elderly, and people in poor health may be more susceptible to adverse health effects from exposure to asbestos released to the environment.

As further described in the HSA Report included in Appendix G, the HSA survey and associated laboratory testing identified ACMs and/or ACCMs in the following materials: wainscot glue (first floor restroom), mastic and roofing felts (roof), black resilient sheet flooring (restroom); and ceiling tile (deli and salon). Lead-based was detected in various locations. Because exposure to such materials can result in adverse health effects in uncontrolled situations, Project contractors would be required to adhere to applicable



federal, State, and local regulations during construction and/or or disposal of materials (refer to RR HAZ-1 and RR HAZ-2).

Numerous PCB ballasts, fluorescent light tubes, mercury-suspect thermostats, and tritium-suspect exit signs were identified in the building. Applicable to PCBs are also discussed in the HSA Report included in Appendix G of this IS/MND and primarily relate to defining regulatory standards and hazards associated with occupied buildings. California's Universal Waste Rule (Title 22 CCR Section 66273 et. seq.) allows individuals and businesses to transport, handle, and recycle seven categories of hazardous wastes, termed universal wastes, in a manner that differs from the requirements for most hazardous wastes. Universal wastes include, but are not limited to, televisions; computers and other electronic devices; as well as batteries, fluorescent lamps, mercury thermostats, and other mercury-containing equipment. The more relaxed and simplified requirements for managing universal wastes were adopted to ensure they are safely managed and not disposed of in the trash.

With implementation of RR HAZ-1 and RR HAZ-2, impacts associated with the potential release of hazardous building materials during demolition activities would be less than significant impact and 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?*

Less than Significant Impact. There are two schools within one-quarter mile of the Project site: Capistrano Valley High School (approximately 0.2 mile south of the Project site) and Saddleback College adjacent to the site to the east (beyond the eastern slope). As discussed above under Threshold b, the Project, which would replace existing commercial/retail uses with RECs, would not involve any uses or activities that would emit hazardous materials or substances. Additionally, as discussed under Threshold a, operations and maintenance activities would involve the use of hazardous materials in limited quantities that, when used correctly and in compliance with existing laws and regulations, would not pose a hazard. Therefore, the Project would have a less than significant impact regarding emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, and no mitigation is required.

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. As discussed under Threshold b above, the Project site is listed in the HAZNET database maintained by the DTSC and is listed in the FINDS maintained by the EPA and there are RECs associated with the Project site. Additionally, the EDR database report identifies off-site RECs. However, based on the Phase II ESA, these RECs do not pose a hazard (Leighton, 2019b). Further, the EDR database report does not identify the Project site on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) (Leighton, 2019b). Therefore, there is no impact and no mitigation is required.



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

No Impact. The Project site is not located within an airport land use plan or within two miles of a public airport. The project site is approximately 14 miles southeast of John Wayne Airport, which is the nearest airport to the Project site and is not included the Airport Influence Area identified in the Airport Environs Land Use Plan (AELUP) for John Wayne Airport (OC ALUC, 2008). The Project would not result in safety hazards or excessive noise for people living or working in the area related to John Wayne Airport. No impacts would occur, and no mitigation is required.

f) *Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

No Impact. The Project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. The City's General Plan Public Safety Element (City of Mission Viejo, 2009) outlines goals and policies aimed at reducing the potential risk of loss of life, injury, property damage, and economic and social dislocation resulting from a disaster, accident, or other hazards in Mission Viejo. Emergency events addressed in the Public Safety Element include those associated with landslides, earthquakes, flooding, hazardous materials exposure, fire, crime, and general emergency preparedness. As shown on Figure PS-6, City of Mission Viejo Emergency Facilities Map, of the General Plan Public Safety Element, Marguerite Parkway (which provides access to the Project site) is one of the City's emergency evacuation routes (City of Mission Viejo, 2009). The Project does not include any features that would physically impair or otherwise conflict with an emergency response plan or emergency evacuation plan. During construction, travel lanes along Marguerite Parkway would be maintained, and construction materials and equipment would be staged on-site or in the parking area northeast of the Project site, and not along Marguerite Parkway. The Project would eliminate one existing access driveway along Marguerite Parkway and a new emergency access driveway would be provided at the southern portion of the Project site. Further the Project would reduce traffic volumes on local streets and would not adversely affect traffic operations on local streets. Therefore, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No impact would occur and mitigation is not 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. Based on review of Figure PS-6, City of Mission Viejo Emergency Facilities Map, of the General Plan Public Safety Element, the Project site is not within a Very High Fire Hazard Severity Zone (VHFHSZ) (City of Mission Viejo, 2009). Further, according to the California Department of Forestry and Fire Protection (CalFire), the Project site is not located within a VHFHSZ (CalFire, 2007). The Project site would not be susceptible to wildfires due to the built out urban development surrounding the Project site. The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. No impact would occur and mitigation is not required.

Mitigation Measures

Implementation of the Project would result in less than significant impacts related to hazards and hazardous materials; therefore, no mitigation measures are required.



3.4.10 Hydrology and Water Quality

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
<i>a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>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>				
<i>i. Result in substantial erosion or siltation on- or off-site;</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>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</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>iv. impede or redirect flood flows?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Requirements

RR WQ-1 The Project Applicant shall comply with the requirements of the State Water Resources Control Board’s (SWRCB) *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* in effect at the time Project construction is initiated. Prior to the issuance of a grading permit, the Project Applicant shall provide the City of Mission Viejo Director of Public Works, or designee, with evidence that a Notice of Intent (NOI) has been filed with the State Water Resources Control Board. Such evidence shall consist of a copy of the NOI stamped by the State Water Resources Control Board or the Regional Water Quality Control Board or a letter from either agency stating that the NOI has been filed.



RR WQ-2 The Project Applicant shall submit a Final Water Quality Management Plan (WQMP) to the City of Mission Viejo Director of Public Works, or designee, for review and approval prior to issuance of grading and building permits. The Final WQMP shall be in compliance with the *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from The Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region* in effect at the time a grading permit is issued, and Section 6.65.310 of the City of Mission Viejo Municipal Code. The Low Impact Development/Site Design, Source Control, and Treatment Control Best Management Practices (BMPs) specified in the Final WQMP shall be incorporated into the Project to reduce pollutants of concern in stormwater runoff from the Project site.

a) *Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Less than significant Impact. The California Porter-Cologne Water Quality Control Act (§ 13000 et seq., of the California Water Code) (Porter-Cologne Act), and the Federal Water Pollution Control Act Amendment of 1972 (also referred to as the Clean Water Act [CWA]) require that comprehensive water quality control plans be developed for all waters within the State of California. The Project site is located within the jurisdiction of the San Diego RWQCB. Water quality information for the San Diego Basin is contained in the San Diego RWQCB's Water Quality Control Plan for the San Diego Basin (Basin Plan) (amended through May 17, 2016) discussed further under Threshold e, and the 2003 Drainage Area Management Plan (DAMP) discussed below. (SDRWQCB, 1994)

Temporary Construction-Related Activities

Construction of the Project would involve demolition, clearing, grading, paving, utility installation, building construction, and landscaping activities. Construction activities would result in the generation of potential water quality pollutants such as silt, debris, chemicals, paints and solvents, and other chemicals with the potential to adversely affect water quality. As such, short-term water quality impacts have the potential to occur during construction of the Project in the absence of protective or avoidance measures.

Construction of the Project would involve the disturbance of more than one acre of soil; therefore, the Project is subject to the requirements of the State Water Resources Control Board's (SWRCB) *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*⁴, herein referred to as the "Construction General Permit". Construction-related water quality impacts would be minimized through compliance with the Construction General Permit, which requires completing a construction site risk assessment to determine appropriate coverage level, filing an NOI with the State Water Resources Control Board, and having a Qualified Stormwater Pollution Prevention Plan (SWPPP) Developer prepare a SWPPP. The SWPPP must include erosion- and sediment control BMPs that would meet or exceed measures required by the determined risk level of the Construction General Permit, in addition to BMPs that control the other potential construction-related pollutants (e.g., nutrients, heavy metals, and certain pesticides, including

⁴ NPDES No. CAS000002, Water Quality Order 2009-0009-DWQ, SWRCB NPDES General Permit for Storm Water Discharges Associated with Construction Activity (adopted by the SWRCB on September 2, 2009, and effective on July 1, 2010). This order was amended by 2010-0014-DWQ, which became effective on February 14, 2011, and 2012-0006-DWQ, which became effective on July 17, 2012. In accordance with the language set forth in Order No. 2009-0009-DWQ, this permit has been administratively extended indefinitely.



legacy pesticides). Mandatory adherence to the Construction General Permit (refer to RR WQ-1) and implementation of measures outlined in the SWPPP would ensure that the Project does not violate any water quality standards or waste discharge requirements during construction activities. Therefore, water quality impacts associated with construction activities would be less than significant and no mitigation measures would be required.

Post-Development Water Quality Impacts

The existing impervious surfaces at the Project site consist of the roof of the building, concrete sidewalk area, and asphalt/concrete area for the parking lot, with islands of landscaped area within the parking area and adjacent to the building. As further discussed under Threshold c, below, under existing conditions, runoff originating from the Project site sheet flows to the existing catch basin in Marguerite Parkway and enters the municipal storm drain system untreated. The Project would consist of a building, concrete sidewalk area, and asphalt/concrete along the driveway entrance. Landscaped area would surround the building, and there would be an overall increase in pervious area. Anticipated pollutants of concern for the Project are: nutrients/pesticides, toxic organic compounds, suspended solids/sediments, trash/debris, oil/grease, and bacteria/virus/pesticides. Per the 2016 303(d) Integrated Report, the following water bodies potentially impacted by this Project are on the 303(d) List for the impairments indicated and total maximum daily loads (TMDLs) apply:

- Oso Creek–Lower: Nutrients (Nitrogen, Phosphorus); Toxicity; Metals (Selenium)
- Arroyo Trabuco Creek: Toxicity; Benthic Community Effects; Indicator Bacteria; Pesticides (Malathion); Nutrients (Nitrogen, Phosphorus)
- San Juan Creek: Pesticides (Dichlorodiphenyldichloroethylene); Indicator Bacteria; Metals (Selenium); Toxicity; Benthic Community Effects; Nutrients (Nitrogen, Dissolved Oxygen, Phosphorus)

Based on current receiving water impairments, the Project's primary pollutants of concern are nutrients, pesticides, and bacteria (JLC, 2019a). However, the level of pollutants is expected to decrease under proposed conditions when compared to existing conditions because, although similar pollutants would be generated, under current conditions there is no water quality treatment.

Notwithstanding the improved water quality conditions with the Project, as identified in RR WQ-2, the Project would be required to comply with City of Mission Viejo Municipal Code Section 6.65.310, which addresses control of urban runoff associated with new development and significant redevelopment projects, and requires compliance with the 2003 DAMP. The Project is also required to comply with the *San Diego RWQCB NPDES Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region*⁵. The City Municipal Code and the MS4 Permit require preparation of a water quality management plan (WQMP), to demonstrate compliance with the City's 2017 Local Implementation Plan (LIP) and Water Quality Ordinance, and to minimize the release of potential waterborne pollutants, including pollutants of concern or downstream receiving waters.

⁵ Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100, NPDES Permit No. CAS0109266 (termed Fifth Term Permit). The Regional MS4 Permit expired on June 27, 2018, but remains in effect under an administrative extension until it is reissued by the San Diego RWQCB.



The WQMP is a site-specific post-construction water quality management program designed to address pollutants of concern of a development project via BMPs, implementation of which ensures the on-going protection of the watershed basin. The Project's WQMP, prepared by JLC Engineering and Consulting, Inc. (JLC), is included in Appendix H of this IS/MND (JLC, 2019a). As identified in the Preliminary WQMP, and Section 2.0, Project Description, the Project would include a subsurface vault system, subsurface modular wetland system (treatment control), Low Impact Development (LID)/site design BMPs (landscaping and subterranean parking to minimize impervious parking area), and source control BMPs (including but not limited to BMP maintenance, drainage facility inspection, storm drain system signs, efficient irrigation, and trash enclosures) to minimize, prevent, and/or otherwise appropriately treat storm water runoff flows before they are discharged from the Project site. Implementation of the Project's BMPs as outlined in the Preliminary WQMP would improve water quality conditions of on-site runoff as compared to existing conditions. Compliance with the WQMP would be required as a condition of Project approval (refer to RR WQ-2), and long-term maintenance of on-site BMPs would be required to ensure their long-term effectiveness.

Based on the foregoing analysis, with adherence to existing regulations identified in RR WQ-1 and RR WQ-2, the Project would not violate any water quality standards or waste discharge requirements during construction or long-term operation. Impacts would be less than significant and no mitigation is required.

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. No groundwater wells are located on the Project site or are proposed as part of the Project. The Project would be served with potable water by MNWD. According to the MNWD's Urban Water Management Plan (UWMP), the majority of MNWD's water needs are met by a combination of imported potable water and locally produced recycled water; MNWD has not received groundwater from the San Juan Groundwater Basin (MNWD, 2015). Additionally, MNWD is projected to meet the future water needs of its customers (MNWD, 2015).

The Project site is located within the boundaries of the San Juan Groundwater Basin. Recharge of the SJVGB comes from flows of the San Juan Creek, Oso Creek, Arroyo Trabuco Creek, and precipitation to the valley floor (DWR, 2004). Although development of the Project would decrease the impervious surface coverage on the site compared to existing conditions due to the increase in landscaped areas, the Project site is not identified as a recharge basin, and infiltration is not feasible due to expansive soils. The Project would not interfere with groundwater recharge.

Based on the foregoing analysis, the Project would neither substantially decrease groundwater supplies nor substantially interfere with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. This impact is less than significant and no mitigation is 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;*



- ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site;*
- iii) create or contribute runoff water which would exceed the capacity or existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- iv) impede or redirect flood flows?*

A Preliminary Hydrology Study (Hydrology Study) was conducted for the Project by JLC (JLC, 2019b), and is included Appendix I of this IS/MND. Under existing conditions, the Project site does not contain any naturally occurring streams or rivers. The western portion of the Project site is developed and the eastern portion of the site is an engineered slope. As shown on Figure 3-5, Pre-Project Condition Site Hydrology Map, the Project site is divided into two drainage areas: Area A and Area B. Area A includes the northern central, and western portion of the site and Area B includes the southern and eastern portion of the site. Currently, stormwater runoff sheet flows from east to west across the Project site and is intercepted by an existing 28-foot catch basin located near the southern portion of the Project site within Marguerite Parkway, which connects to an existing 48-inch storm drain line. Off-site flows from the slope east of the Project site are conveyed through an existing storm drain system located along the eastern and southern portion of the Project site (JLC, 2019a).

Figure 3-6, Post-Project Condition Site Hydrology Map, depicts the proposed on-site drainage condition with implementation of the Project, and Figure 2-9 in Section 2.0 depicts the proposed conceptual storm drain and water quality infrastructure design. As shown, the Project design would perpetuate the drainage pattern in a similar manner that exists in the pre-Project Condition, with storm water flows flowing to the east and entering the existing storm drain system in Marguerite Parkway (JLC, 2019b). The Project site would be divided into three drainage areas (A, B and C); Drainage Area C is part of Drainage Area A in the pre-Project condition. As shown on Figure 2-9, inlets in Drainage Area A would convey the runoff to subsurface detention basins that have been designed to meet the established hydromodification criteria. The subsurface detention basins would discharge the flow rates into a modular wetland system that would be used to filter the pollutants of concern associated with the Project runoff. Additionally, as identified in Threshold a, above, LID/site design, source control, treatment control BMP would be implemented to minimize, prevent, and/or otherwise appropriately treat storm water runoff flows before they are discharged from the Project site. Consistent with existing condition, runoff from Drainage Area B would discharge to the catch basin along Marguerite Parkway, which would be relocated to the north to accommodate the emergency access driveway at the southwest corner of the Project site. Drainage Area C includes the proposed emergency access driveway, which would be comprised of landscaping and a turf block with grass. This area would discharge into Marguerite Parkway and would be self-treating. Off-site flows from the easterly slope would be conveyed through a new storm drain line along the north entrance driveway toward Marguerite Parkway and then conveyed south, where it would connect with the existing storm drain in Marguerite Parkway at the southern corner of the Project site. The flows for this system would not be modified, only the storm drain is being relocated.

c.i) Less than Significant Impact with Mitigation. As discussed above, the Project would not substantially alter the existing drainage pattern of the Project site, and there are no streams or rivers on the Project site. However, as discussed under Threshold a, there is a potential for increased erosion and siltation to occur during construction and operation. Potential impacts associated with impervious area and the pollutants of concern would be mitigated through implementation of BMPs outlined in the Regional MS4 Permit adopted by the San Diego Regional Water Quality Control Board. As identified in the Project-specific WQMP, LID/site design, source control, treatment control BMP would be implemented to



Figure 3-5





Source(s): JLC Engineering & Consulting, Inc. (08-06-2019)

Figure 3-6





minimize, prevent, and/or otherwise appropriately treat storm water runoff flows before they are discharged from the Project site. With adherence to applicable regulations which address protection of water quality during construction and operation, including compliance with the Construction General Permit, implementation of a SWPPP (refer to RR WQ-1), compliance with the Regional MS4 Permit and implementation of the BMPs identified in the Project-specific WQMP (refer to RR WQ-2), impacts related to erosion and siltation during construction and operation would be less than significant with mitigation.

c.ii) Less than Significant Impact with Mitigation. As discussed above, storm water runoff flows discharged from the Project site currently sheet flow to the existing storm drain system located in Marguerite Parkway; there is 28-foot catch basin that connects to a 48-inch storm drain line in Marguerite Parkway. The Hydrology Study included in Appendix I of this Initial Study addresses the estimated change in rate and amount of stormwater runoff from the Project site under developed conditions. The Orange County Hydrology Manual was used to develop the hydrological parameters for the rational method, and the calculations were performed for the 100-year storm event (Q₁₀₀) using the computer program developed by Civil CADD/Civil Design.

Table 3-12, Pre- vs. Post-Project Hydrology Summary, outlines the results of the rational method analysis and was developed to provide a comparative analyses between the pre-Project and post-Project drainage areas. Figure 3-5 and Figure 3-6 demonstrate how the capture of stormwater runoff varies between existing and proposed conditions, respectively.

Table 3-12 Pre- vs. Post-Project Hydrology Summary

Drainage Area	Pre-Project Discharge Q ₁₀₀ (cfs)	Post-Project Discharge Q1 (cfs)
Area A	5.04	8.29
Area B	6.31	2.11
Area C ^a	N/A	1.16

cfs= cubic feet per second

a. Area C was a part of Area B under pre-Project Conditions.

Source: (JLC, 2019b, Table 1)

Area B discharges into Marguerite Parkway under existing and proposed conditions, and is captured by the existing catch basin that would be relocated to the north as part of the Project. With the Project, the discharge from Area B and Area C into Marguerite Parkway would be reduced from 6.31 cfs to 3.27 cfs. The discharge from Area A would increase from 5.04 cfs to 8.29 cfs with the Project. The increase in flow rate is attributed to the proposed stormwater improvements within Area A that capture the runoff through various inlets within the Project footprint. These inlets would convey the runoff to the subsurface detention basins, which would discharge the flow rates into a modular wetland system that would be used to filter the pollutants of concern. The post-Project runoff for Area B would be tributary to the relocated catch basin and the Area A runoff would be routed through a subsurface storm drain that connects to the existing storm drain within Marguerite Parkway. As a result, the Project is not diverting drainage areas from Area A and Area B that would impact downstream storm drain systems. Area C, which is approximately 0.2 acres, consists of area that was part of Area A in the pre-Project condition and would no longer be captured onsite in the post-Project condition. This is a result of the proposed driveway and relocation of the existing catch basin. Area C would sheet flow within the proposed driveway and discharge 1.16 cfs directly into Marguerite Parkway; this runoff would be intercepted by a subsequent catch basin at the intersection of Marguerite Parkway and Avery Parkway. As previously identified, the Project would involve relocation of the existing storm drain that is currently conveyed along the easterly



and southerly portions of the project site due to the location of the proposed building. However, the flows for this system would not be modified, only the line is being relocated. (JLC, 2019b)

By increasing onsite stormwater capture, the discharge from the Project site into Marguerite Parkway and the relocated 28-foot catch basin from Area B is effectively decreased by 4.20 cfs. The decrease in the magnitude of runoff to the on-grade 28-foot catch basin would provide a design with a higher flow rate capture. Since it can be concluded that the by-pass from the 28-foot catch basin would be reduced, the 1.16 cfs discharge from Area C into Marguerite Parkway would have a negligible impact to the downstream catch basin located on Marguerite Parkway and Avery Parkway. The increase to Area A does not impact the downstream facilities, since the overall net increase for the whole site (Areas A, B, and C) is only 0.21 cfs, which is negligible. The storm drain system has been designed to intercept a total of 11.35 cfs and only 10.40 cfs would be intercepted in the post-Project condition, with 1.16 cfs from Area C being conveyed downstream. Potential impacts associated with impervious area would be mitigated through implementation of BMPs outlined in the Regional MS4 Permit adopted by the San Diego Regional Water Quality Control Board, including LID/site design BMPs identified in the Project-specific WQMP. Therefore, the Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site and impacts would be less than significant with mitigation. (JLC, 2019b)

c.iii) Less than Significant Impact with Mitigation. Under existing conditions, much of the developed portion of the Project site is covered with impervious surfaces; approximately 19 percent of the site is pervious. Implementation of the Project would increase the pervious surface area to approximately 32 percent) through the addition of landscaped areas, which would increase the potential for groundwater infiltration. The Project has been designed to perpetuate the drainage pattern in a similar manner that exists in the Pre-project condition. As demonstrated through the analysis presented under Threshold c.ii, the Project would result in similar storm water flows as compared to existing conditions (refer to Table 3-12), and would not impact downstream facilities. Further, the Project would include subsurface basin systems to mitigate for hydromodification to reduce downstream impacts to local receiving waters. (JLC, 2019b) Potential impacts associated with impervious area and the pollutants of concern would be mitigated through implementation of BMPs outlined in the Regional MS4 Permit adopted by the San Diego Regional Water Quality Control Board, including LID/site design, treatment control and source control BMPs identified in the Project-specific WQMP. Therefore, the Project would not create or contribute runoff water which would exceed the capacity or existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. This impact is less than significant with mitigation.

c.iv) No Impact. There are no natural drainages on the Project site and as further discussed in Threshold d below, according to Federal Emergency Management Agency (FEMA) Map No. 06059C0441J, no portion of the Project site is located within a designated 100-year flood hazard area (FEMA, 2009). Therefore, the Project would not impede or redirect flood flows. No impact would occur and no mitigation is required.

d) *Would the Project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

No Impact. The entire Project site is located within FEMA Flood Zone "X." Flood Zone X is an area that is determined to be outside the 0.2 percent annual chance flood plain; thus, the Project is not located within an area subject to 100-year or 500-year flood hazards (FEMA, 2009). The Pacific Ocean is located approximately 5.5 miles southwest of the site; therefore, tsunami risks are not associated with the Project



site or surrounding area. Further, according to the National Oceanic and Atmospheric Administration (NOAA), a seiche is a standing wave oscillating in a large semi- or fully-enclosed body of water such as a bay or lake, and is typically generated as a result of strong winds, rapid changes in atmospheric pressure, earthquakes, or tsunamis (NOAA, 2015). There are no large semi- or fully-enclosed bodies of water within the vicinity of the Project site. The nearest enclosed body of water is Laguna Niguel Lake, located approximately 2.0 miles west of the Project site (Google Earth Pro, 2019).

Because the Project site is not in a flood hazard, tsunami or seiche zone, there is no potential risk related to the release of pollutants due to Project inundation. No impacts would occur and 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. California's Porter-Cologne Act requires adoption of water quality control plans that contain the guiding policies of water pollution management in California; regional water quality control plans (known as a Basin Plans) have been adopted by each of the Regional Water Boards. As previously identified, the Project site is in the San Diego Region and the San Diego RWQCB has developed a Basin Plan for the San Diego Basin, which was adopted in September 1994 and contains amendments through May 17, 2016. The Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the Region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan (SDRWQCB, 1994). The RWQCB ensures compliance with the Basin Plan through its issuance of NPDES Permits, issuance of Water Discharge Requirements WDR, and Water Quality Certifications pursuant to Section 401 of the Clean Water Act (CWA).

As discussed under Threshold a, above, there would be a potential for the Project to generate pollutants and impact water quality during construction and operation. However, during operation, the Project would decrease the amount of pollutants enter the storm system and improve water quality compared to existing conditions since there is currently no water quality treatment in place at the Project site. However, as required, a Project-specific WQMP has been prepared for the Project, and the Project Applicant is required to implement the Project in compliance with applicable regulations addressing water quality, including applicable NPDES permits. As specified in RR WQ-1, the Project would be required to comply with requirements set forth by the Construction General Permit and City Municipal Code, including preparation of an SWPPP and implementation of construction BMPs to control stormwater runoff and discharge of pollutants. As discussed in Threshold a, the primary pollutants of concern for the Project based on receiving water impairments are nutrients, pesticides, and bacteria are nutrients. As identified in RR WQ-2, a Final WQMP would be prepared for the Project and LID/site design, source control and treatment control BMPs would be implemented to treat stormwater runoff and reduce impact to water quality. The Project would not degrade water quality, cause the receiving waters to exceed the water quality objectives, or impair the beneficial use of receiving waters. As such, the Project would not result in water quality impacts that would conflict with the San Diego RWQCB's Water Quality Control Plan for the San Diego Basin. This impact is less than significant, and no mitigation is required.



The 2014 Sustainable Groundwater Management Act (SGMA) requires local public agencies and Groundwater Sustainability Agencies (GSAs) in “high”- and “medium”-priority basins to develop and implement Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs (DWR, 2019a). GSPs are detailed road maps for how groundwater basins will reach long term sustainability. The Project site is located within the SJVGB. The California Department of Water Resources (DWR) currently categorizes the SJVGB as a “very low-priority” basin and therefore is not subject to the requirements of the SGMA (DWR, 2019b). Accordingly, the Project would not conflict with or obstruct implementation of a sustainable groundwater management plan.

Mitigation Measures

Implementation of the Project would result in less than significant impacts, with adherence to the regulatory requirements outlined in RR WQ-1 and RR WQ-2, to hydrology and water quality; therefore, no mitigation measures are required.



3.4.11 Land Use and Planning

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Physically divide an established community?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Would the Project physically divide an established community?

No Impact. The Project site is currently developed with a multi-tenant commercial/retail building and associated parking lot within an urbanized portion of Mission Viejo. The Project site is primarily surrounded by commercial uses immediately to the north, west (beyond Marguerite Parkway), and south, and Saddleback College to the east (at the top of the slope that ascends from the Project site). Marguerite Parkway forms the western boundary of the Project site and Avery Parkway is located further to the south, south of the existing commercial uses that are adjacent to the Project site. The Project involves redevelopment of the Project site with a congregate care/assisted living facility and would not physically divide an established community. Therefore, no impacts would result and 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?

Less than Significant Impact. With respect to regional planning, SCAG is the MPO for Riverside, Los Angeles, Orange, San Bernardino, Ventura, and Imperial Counties. The federal government mandates SCAG, as the designated MPO, to prepare plans for growth management, transportation, air quality, and hazardous waste management. In addition, SCAG reviews EIRs for projects of regional significance for consistency with its regional plans. The policies and strategies of SCAG’s regional planning programs, including the 2016–2040 RTP/SCS and Regional Housing Needs Assessment (RHNA) are not applicable to the Project because the proposed project is not of Statewide, Regional or Areawide Significance.

The land use plans, policies, and regulations applicable to the Project include the City’s General Plan and the City’s Zoning Code/Municipal Code; the Project’s consistency with applicable provisions of these planning documents is discussed below.

City of Mission Viejo General Plan

California State law requires that every city adopt a General Plan to guide growth and development. Mission Viejo’s General Plan is divided into eight “elements” or chapters that contains goals, policies and programs which are intended to guide land use and development decisions in the City. The General Plan includes the required elements and two optional elements (Economic Development and Growth Management). From time to time the City has amended or comprehensively updated elements of the General Plan to further refine the City’s vision for its own long-term physical development.



The City's General Plan Land Use Element was adopted in 2013. This Element identifies the type and location of existing and future land uses within the City. Based on review of the City's Community GIS, the Project site and areas to the north, west, and south, have a land use designation of Commercial Highway, and Saddleback College, to the east, has a land use designation of Community Facility (City of Mission Viejo, 2019). The Commercial Highway designation is intended to provide highway-oriented business that provide goods and services to a broad population utilizing major transportation corridors. Specialized housing designed to meet the physical and social needs of senior citizens, such as the Project, is allowed in Commercial Highway-designated areas, provided the property is located within a Senior Housing Overlay Zone. Therefore, for consistency with General Plan, the Project Applicant is requesting a Zone Change involving a Zoning Map Amendment to place a Senior Housing (SH) Overlay Zone on the Project site's current Commercial Highway zone.

As stated in Section 9.11.005(b)(7) of the City's Municipal Code, "the purpose and intent of the Senior Housing (SH) Overlay Zone is to regulate specialized housing designed to meet the physical and social needs of senior citizens in the commercial community center, commercial highway, and office/professional zones." Consistent with this purpose, the Project would provide supportive living for adults typically over the age of 62 (average age is 82 years old) where they can experience 24-hour, 7 days per week, general monitoring by trained staff. Among many other things, the community provides living accommodations, utilities, meals from a commercial kitchen, supervision, security, emergency call systems, assistance with activities of daily living, medication management, personal hygiene, and grooming, dressing, and undressing, transferring, bathroom management and dining assistance.

The General Plan Housing Element adopted in March 2013 identifies housing policies and programs aimed at meeting the identified housing needs of the City's current and anticipated future population (City of Mission Viejo, 2013c). The Housing Element identifies "Special Needs" groups that have greater difficulty in finding decent, affordable housing due to special circumstances. Among others, elderly persons are considered a Special Needs group. As discussed above, with the placement of a Senior Housing (SH) Overlay on the Project site, the Project would provide a congregate care/assisted living facility that would assist the City in meeting the housing needs for elderly persons.

With respect to policies adopted for the purpose of avoiding or mitigating an environmental effect, the Aesthetics section of this IS/MND addresses the Project's consistency with General Plan policies related to community identity and urban design (refer to Table 3-2, General Plan Consistency Analysis) and as presented in the analysis, the Project is consistent with those policies. Further, the development intensity standard applicable to the Commercial Highway land use designation as presented in Table LU-2 of the General Plan Land Use Element (1.5:1 FAR) is consistent with the development standards in the City's Municipal Code as addressed in Table 3-1, Zoning Development Standards Consistency Analysis. The Project's 1.31 FAR does not exceed the established maximum FAR of 1.5.

The purpose of the General Plan Circulation Element is to provide for a safe, sensible, and efficient circulation system for the City (City of Mission Viejo, 2013d). As further discussed in the Transportation Section of this Initial Study, the Project would result in a net reduction of traffic with the elimination of the existing commercial/retail building and development of the proposed congregate care/assisted living facility. Further, the Project would eliminate an existing driveway on Marguerite Parkway, with access being limited to the existing driveway at the northern end of the Project site that is shared with the commercial uses to the north. An emergency access only driveway would be provided at the south end of the Project. Further, the Project site is served by existing sidewalks, on-street striped bikeways and transit



(bus). Therefore, the Project would not impact the City's circulation system, and could improve existing conditions with the reduction in traffic and elimination of a driveway access along Marguerite Parkway. The Transportation section of this IS/MND addresses the Project's consistency with relevant transportation-related goals and policies.

The General Plan Land Use Element includes Policy 2.8 to *"Review the fiscal and environmental impacts of proposed major development."* (City of Mission Viejo, 2013b) While the Project is not a "major development" the potential environmental impacts of the Project have been evaluated throughout this Initial Study, as required by CEQA. With respect to the fiscal review, economic impacts are not an environmental issue and are not required to be addressed in this IS/MND. The General Plan Conservation/Open Space Element addresses protection of natural resources (i.e., biological resources and mineral resources); water quality, storm water, and urban runoff management; and air quality, climate change, energy conservation, and green building practices (City of Mission Viejo, 2013a). As identified through the respective sections of this IS/MND, there are no natural resources within the Project site with the exception of ornamental landscaping, and the Project include extensive landscaping that would compensate for the removal of existing vegetation. Impacts related to biological resources, water quality, air quality, greenhouse gas emissions, and energy would be less than significant with mitigation or compliance with regulatory requirements. Compliance with applicable provisions of the General Plan Noise Element is addressed in the Noise section of this IS/MND. As identified, with adherence to established noise standards, as required through Project design mitigation measures, the exposure of Project residents to excessive traffic noise would be less than significant. It should be noted that air quality and GHG emissions, and noise generated from the Project site would be reduced compared to existing conditions due to the overall reduction in traffic generated by the Project compared to the existing commercial/retail building.

The General Plan Land Use Element Goal 10 is to *"Provide necessary storm drainage and reduce the discharge of pollutants and runoff flow from urban development to the maximum extent practicable"* and includes associated policies to accomplish this goal. (City of Mission Viejo, 2013b) As addressed through the analysis presented in the Hydrology and Water Quality section of this IS/MND, the Project would improve water quality since under existing conditions there are no BMPs at the Project site to address water quality. The Project includes required LID/site design, source control and treatment control BMPs and would be consistent with Goal 10 and its associated policies.

Therefore, with approval of the required Senior Housing (SH) Overlay, the Project would not conflict with the Community Highway land use designation for the Project site and a General Plan amendment would not be required. The Project would not cause a significant environmental impact due to a conflict with the City's General Plan or any goals or policies in the City's General Plan. This impact is less than significant and no mitigation is required.

City of Mission Viejo Zoning Code/Municipal Code

The Project site is zoned (CH) Commercial Highway. As with the Commercial Highway land use designation, the CH zoning classification is "primarily intended to provide for highway-oriented businesses offering goods and services to a mobile population using major transportation corridors" and senior housing is allowed in this zone within a Senior Housing (SH) overlay zone, and subject to a Planned Development Permit. With the addition of the Project's amendment to the City Zoning Map to add an SH overlay, and approval of a Planned Development Permit. Pursuant to Chapter 9.47 of the City's Municipal Code, the



Planned Development Permit procedure is intended to protect the integrity and character of the residential, commercial, and industrial areas of the City. The Planned Development Permit process involves review of the location, design, configuration, and impact of the proposed use be conducted by comparing the use to established standards and design guidelines. Therefore, for consistency with the City's Municipal Code, the Project Applicant is requesting a Zone Change involving a Zoning Map Amendment to place a Senior Housing (SH) Overlay Zone on the Project site's current Commercial Highway zone, and is requesting a Planned Development Permit.

The Project's consistency with the development standards for the CH Zone and other applicable Commercial zone standards, as outlined in the Municipal Code, are addressed in the Aesthetics section of this IS/MND. As identified, the Project would not conflict with any of the standards with the exception of the maximum 35-foot height limit, for which the Project Applicant has requested a variance. As shown on the building elevations included in Figure 2-5, the horizontal parapet portions of the roof on the building sit below the maximum 35-foot height limit except for the southeast corner, which rises to 38-feet to create interest in that portion of the building. Additionally, the sloped portions of the roof range from 37-feet to 38-feet to allow for variations in the aesthetics, thereby eliminating the "sameness" and "flat" appearance that would come from maintaining a 35-foot limit across the entire project. There is a distinct Spanish-style chimney element in northwest corner of the building that rises to 41-feet. Additionally, in the southwest corner of the building, the adjacent finished grade is retained by a wall to accommodate the emergency vehicle access drive from Marguerite Parkway. The result in this single location (one side of one corner of the building) is a building height of 40-feet from finished grade to the highest nearby building peak. It is 35-feet from that finished grade to the highest structure at the building corner. In summary, the exceedance of the height limit is requested to enhance the architectural interest of the proposed building. Based on the analysis provided in the Aesthetics section of this IS/MND, the proposed structure and approval of a variance would not result in aesthetic impacts or adversely affect the visual character of the Project site or surrounding areas.

Therefore, with approval of the requested Senior Housing (SH) Overlay to allow the Project in the CH zone, Planned Development Permit to allow the propose use, and variance to allow for exceedance of the established height limit, the Project would not conflict with the City's Zoning Code or Municipal Code. Additionally, the Project would not cause a significant environmental impact due to a conflict with applicable provisions of the City's Zoning Code or Municipal Code. This impact is less than significant and no mitigation is required.

Mitigation Measures

Implementation of the Project would result in less than significant impacts to land use and planning; therefore, no mitigation measures are required.



3.4.12 Mineral Resources

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. 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. The DOC Generalized Mineral Land Classification for the area shows that the Project site is classified as Mineral Resource Zone 3 (MRZ-3), but adjacent to areas classified MRZ-1 (DOC, 2019b). MRZ-1 indicates areas with no significant mineral deposits. MRZ-3 indicates areas where the available geologic information indicates that mineral deposits exist or are likely to exist; however, the significance of the deposit cannot be evaluated from available data. Further, the County of Orange General Plan Resources Element includes an inventory of the county-wide resources, including mineral resources (County of Orange, 2013). There are no known mineral resources of value to the region located in Mission Viejo.

The California Department of Conservation does not show oil, gas, or geothermal fields underlying the Project site; and no oil or gas wells are recorded on or near the site in the Division of Oil, Gas, and Geothermal Resources (DOGGR) Well Finder (DOC, 2019c). No mines, wells, or other resource extraction activity occurs on the Project site or is known to have ever occurred on the Project site.

The Project would not result in the loss of a known commercially valuable or locally important mineral resource. Accordingly, implementation of the Project would not 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, and no impact would occur.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. As discussed above, no known valuable mineral resources exist on or near the Project site, and no mineral resource extraction activities occur on the site. In addition, the western portion of the Project site is currently developed with a commercial/retail building and an associated paved asphalt parking lot, while the eastern portion of the Project site is an engineered slope. According to the City's General Plan Conservation and Open Space Element, there is no managed production of mineral resources in the City. Figure COS-2, Open Space Used for the Managed Production of Resources, of the Conservation and Open Space Element, identifies a small portion of Trabuco Creek within the Arroyo Trabuco Golf Club as a sand and gravel resource area (City of Mission Viejo, 2013a). The Project site is not identified as a locally-important mineral resource recovery site delineated on a local general, specific plan, or other land



use plan. Therefore, the Project would not result in the loss of availability of a locally-important mineral resource recovery site. No impact would result and not mitigation is required.

Mitigation Measures

Implementation of the Project would result in no impacts to mineral resources; therefore, no mitigation measures are required.



3.4.13 Noise

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project result in:				
a) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) <i>Generation of excessive groundborne vibration or groundborne noise levels?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) <i>For a project located within the vicinity of a private airstrip or an airport land use land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Information presented in this section is based on the MorningStar Senior Living Noise Impact Analysis (Noise Analysis), prepared by Urban Crossroads (November 2, 2019) (Urban Crossroads, 2019d), included as Appendix I of this IS/MND.

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 Impact.

Noise Fundamentals

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (Urban Crossroads, 2019d)

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (Leq). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy



as a time varying signal over a given sample period and is commonly used to describe the “average” noise levels within the environment. (Urban Crossroads, 2019d)

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to dBA Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Mission Viejo relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources. (Urban Crossroads, 2019d)

Sensitive Receivers

Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals. The nearest sensitive receptors to the Project site are existing residential outdoor living areas (backyards) approximately 435 feet south of the Project site on Avery Parkway, as shown on Figure 3-4 in the Air Quality section of this IS/MND. (Urban Crossroads, 2019d)

Noise Regulations

Applicable State and local noise regulations are addressed in Section 3, Regulatory Setting, of the Noise Analysis included in Appendix I of this IS/MND. The State of California’s noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

The City of Mission Viejo has adopted a Noise Element of the General Plan which contains a comprehensive program for noise reduction and control. The noise criteria identified in the Noise Element are guidelines to evaluate the land use compatibility of transportation-related noise. The Noise Compatibility Matrix, shown on Exhibit 3-A of the Noise Analysis included in Appendix I, provides the City



with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The Noise Compatibility Matrix identifies that “nursing home” uses, such as the Project’s assisted living use, are considered normally and conditionally acceptable with exterior noise levels below 70 dBA CNEL. For conditionally acceptable land use, the General Plan indicates new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design.

In addition, the General Plan Noise Element indicates 65 dBA CNEL as the exterior noise level criteria for transportation noise in outdoor living areas, with an interior noise level standard of 45 dBA CNEL. Based on the General Plan Noise Element, the Noise Analysis for the Project has been prepared to satisfy an exterior noise level criterion of 65 dBA CNEL in outdoor living areas, and an interior noise standard of 45 dBA CNEL consistent with the State of California Building Code.

Existing Noise Levels

To assess the existing noise level environment, five 24-hour noise level measurements were taken at sensitive receiver locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Figure 3-7, Noise Measurement Locations depicts the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Tuesday, July 2nd, 2019. (Urban Crossroads, 2019d) The noise measurement methods are further described in Section 5 of the Noise Analysis included in Appendix I.

The noise measurements presented below focus on the average or Leq. The Leq represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 3-13, 24 Hour Ambient Noise Level Measurements identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Additionally, median noise levels (L_{50}) are provided in Table 3-13 consistent with the City of Mission Viejo Municipal Code exterior noise level standards. Appendix 5.2 of the Noise Analysis in Appendix I provides a summary of the existing hourly ambient noise levels described below:

- **Location L1** represents the noise levels northeast of the Project site on College Drive near Saddleback College. The noise level measurements collected show an overall 24-hour exterior noise level of 58.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 56.6 dBA L_{eq} with an average nighttime noise level of 48.8 dBA L_{eq} .
- **Location L2** represents the noise levels east of the Project site on College Drive near Saddleback College. The noise level measurements collected show an overall 24-hour exterior noise level of 59.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 55.0 dBA L_{eq} with an average nighttime noise level of 52.2 dBA L_{eq} .
- **Location L3** represents the noise levels east of the Project site in an existing parking lot at Saddleback College near sports fields. The 24-hour CNEL indicates that the overall exterior noise level is 57.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 57.4 dBA L_{eq} with an average nighttime noise level of 47.4 dBA L_{eq} .



- Location L4** represents the noise levels south of the Project site on Avery Parkway adjacent to existing commercial uses and residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 65.2 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 63.7 dBA L_{eq} with an average nighttime noise level of 56.2 dBA L_{eq} .
- Location L5** represents the noise levels within the Project site boundaries and an existing commercial parking lot. The noise level measurements collected show an overall 24-hour exterior noise level of 64.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 62.3 dBA L_{eq} with an average nighttime noise level of 55.1 dBA L_{eq} .

Table 3-13 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. The 24-hour existing noise level measurements are also shown on Table 3-13. (Urban Crossroads, 2019d)

Table 3-13 24 Hour Ambient Noise Level Measurements

Location ¹	Description	Energy Average Noise Level (dBA L_{eq}) ²		Average Median Noise Level (dBA L_{50}) ²		CNEL
		Daytime	Nighttime	Daytime	Nighttime	
L1	Located northeast of the Project site on College Drive near Saddleback College.	56.6	48.8	53.7	45.8	58.0
L2	Located east of the Project site on College Drive near Saddleback College.	55.0	52.2	52.3	47.1	59.3
L3	Located east of the Project site in an existing parking lot at Saddleback College near sports fields.	57.4	47.4	49.7	42.1	57.5
L4	Located south of the Project site on Avery Parkway adjacent to existing commercial uses and residential homes.	63.7	56.2	55.5	47.9	65.2
L5	Located within the Project site boundaries and an existing commercial parking lot.	62.3	55.1	58.9	51.2	64.0

¹ See Exhibit 5-A of Appendix I for the noise level measurement locations.

² The long-term 24-hour measurement printouts are included in Appendix 5.2 of Appendix I.

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

(Urban Crossroads, 2019d, Table 5-1)



LEGEND:

 Noise Measurement Locations

Source(s): Urban Crossroads (08-15-2019)

Figure 3-7



Not to Scale



NOISE MEASUREMENT LOCATIONS



Construction-Related Noise Impacts

To control noise impacts associated with the construction of the Project, the City has established limits to the hours of operation. The City of Mission Viejo Municipal Code, Section 9.22.035(d) indicates that construction noise is exempt from the noise level limits of the Municipal Code if activity occurs within the permitted hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays. However, the City's General Plan and Municipal Code do not establish numeric maximum acceptable construction source noise levels at potentially affected receivers which would allow for a quantified determination of potential impacts under CEQA. (Urban Crossroads, 2019d)

To evaluate whether the Project would generate potentially significant temporary construction noise levels at off-site sensitive receiver locations, a construction-related noise level threshold is adopted from the Criteria for Recommended Standard: Occupational Noise Exposure prepared by the National Institute for Occupational Safety and Health (NIOSH). A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3-dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of the Project analysis, the lowest, more conservative construction noise level threshold of 85 dBA Leq is used as an acceptable threshold for construction noise at the nearby sensitive receiver locations. Since this construction-related noise level threshold represents the energy average of the noise source over a given time, they are expressed as Leq noise levels. Therefore, the noise level threshold of 85 dBA Leq over a period of eight hours or more is used to evaluate the potential Project-related construction noise level impacts at the nearby sensitive receiver locations. (Urban Crossroads, 2019d)

The noise analysis addresses typical construction noise and noise generated from pile driving activities.

Noise would be generated by typical construction equipment operating at the Project site, including a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment are expected to occur in the following stages: demolition/site preparation, grading, building construction, paving, and architectural coating. The construction noise analysis was prepared based on reference noise level measurements taken by Urban Crossroads to describe the typical construction activity noise levels for each stage of Project construction, as described in Section 11.3 of the Noise Analysis included in Appendix I of this IS/MND. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to in excess of 80 dBA when measured at 50 feet. Hard site conditions are used in the construction noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e. construction equipment). For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver. (Urban Crossroads, 2019d)

Using the reference construction equipment noise levels, calculations of the Project's typical construction noise level impacts at the nearby sensitive receiver locations were completed. Figure 3-8,



Figure 3-8



Not to Scale



CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



Construction Activity and Receiver Locations, shows the construction activity boundaries in relation to the nearby sensitive receptors. Tables 11-2 to 11-6 of the Noise Impact Analysis included in Appendix I show the Project construction stages and the reference construction noise levels used for each stage. Table 3-14, Unmitigated Construction Equipment Noise Level Summary, provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations. As shown on Table 3-14, based on the reference construction noise levels, the Project-related construction noise levels when the highest reference noise level is operating at the edge of primary construction activity nearest each sensitive receiver location would range from 42.7 to 72.8 dBA Leq at the sensitive receiver locations.

Table 3-14 Unmitigated Construction Equipment Noise Level Summary

Receiver Location ¹	Construction Noise Levels by Stage (dBA Leq)					
	Demolition / Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Construction Noise Level ²
R1	43.1	48.7	42.7	46.8	42.7	48.7
R2	48.8	54.4	48.4	52.5	48.4	54.4
R3	48.6	54.1	48.1	52.3	48.1	54.1
R4	64.0	69.6	63.6	67.7	63.6	69.6
R5	67.2	72.8	66.8	70.9	66.8	72.8

¹ Noise receiver locations are shown on Exhibit 11-A.

² Estimated construction noise levels during peak operating conditions. (Urban Crossroads, 2019d, Table 11-7)

To evaluate whether the Project would generate potentially significant short-term noise levels at off-site sensitive receiver locations the NIOSH noise level threshold of 85 dBA Leq is used. Table 3-15 shows the highest construction noise levels at the potentially impacted receiver locations are expected to approach 72.8 dBA Leq and would satisfy the 85 dBA Leq significance threshold during temporary Project construction activities.

Table 3-15 Construction Equipment Noise Level Compliance (dBA Leq)

Receiver Location ¹	Construction Noise Levels (dBA Leq)		
	Highest Levels ²	Threshold ³	Threshold Exceeded? ⁴
R1	48.7	85	No
R2	54.4	85	No
R3	54.1	85	No
R4	69.6	85	No
R5	72.8	85	No

¹ Noise receiver locations are shown on Exhibit 11-A of Appendix I.

² Estimated construction noise levels during peak operating conditions, as shown on Table 11-7 of Appendix I.

³ Construction noise level threshold as shown on Table 4-2 of Appendix I.

⁴ Do the estimated Project construction noise levels exceed the construction noise level threshold? (Urban Crossroads, 2019d, Table 11-8)



The Project’s typical construction activities would be conducted in compliance with the hours of construction identified in the City Municipal Code. Impacts from Project typical construction noise levels are considered less than significant and no mitigation is required.

An additional analysis was completed to assess potential impacts due to pile driving activities associated with the retaining wall in the eastern portion of the Project site. Pile driving methods can include different equipment types, such as impact or drilling, and as such, noise levels will vary depending on the method used. With impact pile driving, the analysis shows the unmitigated noise levels range from 68.3 to 91.0 dBA Leq at the receiver locations, as shown on Table 3-16, Impact Pile Driving Noise Levels, which could potentially exceed the 85 dBA Leq threshold at receptor location R4, which is the commercial uses south of the Project site. Therefore, impact pile driving activity noise levels represent a potentially significant impact at the closest commercial building to the Project site.

Table 3-16 Impact Pile Driving Noise Levels

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Leq)
Pile Driver (Impact)	94.0
Highest Reference Noise Level at 50 Feet (dBA Leq):	94.0

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA Leq) ³	Estimated Noise Barrier Attenuation (dBA Leq) ⁴	Construction Noise Level (dBA Leq)
R1	962'	-25.7	0.0	68.3
R2	425'	-18.6	0.0	75.4
R3	450'	-19.1	0.0	74.9
R4	71'	-3.0	0.0	91.0
R5	300'	-15.6	0.0	78.4

¹ Source: FHWA, Roadway Construction Noise Model.

² Distance from the nearest point of pile driving activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers/berms in the Project study area. (Urban Crossroads, 2019d)

However, with drilled pile driving required as mitigation when pile driving occurs near receiver location R4 (existing commercial uses south of the Project site) (refer to MM NSE-2), this impact would be reduced to less than significant levels ranging from 51.3 to 74.0 dBA Leq at the nearby receiver locations, as shown on Table 3-17, Drilled Pile Driving Noise Levels.



Table 3-17 Drilled Pile Driving Noise Levels

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Pile Driver (Drilling)	77.0
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	77.0

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	962'	-25.7	0.0	51.3
R2	425'	-18.6	0.0	58.4
R3	450'	-19.1	0.0	57.9
R4	71'	-3.0	0.0	74.0
R5	300'	-15.6	0.0	61.4

¹ Source: FHWA, Roadway Construction Noise Model.

² Distance from the nearest point of pile driving activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers/berms in the Project study area. (Urban Crossroads, 2019d)

Operational Noise Impacts

This section analyzes the potential operational noise impacts due to the Project’s stationary noise sources on the off-site sensitive receiver locations; Figure 3-9, Operational Noise Source and Receiver Locations, identifies the receiver locations and noise source locations used to assess the Project-related operational noise levels. To analyze noise impacts originating from a designated fixed location or private property such as the Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, parking lot vehicle movements, a dog run, and outdoor pool activity are typically evaluated against standards established under a jurisdiction’s Municipal Code. To provide a “worst-case” analysis, the Project’s Noise Analysis assumed all the Project’s noise sources operating continuously. This represents a “worst-case” analysis because noise level impacts would likely vary throughout the day. The Project’s operational noise levels were estimated based on reference noise level measurements of similar operational activities as described in Section 10.1 of the Noise Analysis included in Appendix I of this IS/MND.



Figure 3-9



Not to Scale



OPERATIONAL NOISE SOURCES AND RECEIVER LOCATIONS



A significant impact would result:

- If Project-related operational (stationary-source) noise levels exceed the exterior noise level standards at the land uses previously identified in the City of Mission Viejo Municipal Code (refer to Table 3-18), Section 9.22.025:

Table 3-18 City of Mission Viejo Operational Noise Standards

City	Land Use	Time Period	Exterior Noise Level Standards ¹				
			L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (<1 min)
Mission Viejo ²	Residential	7:00 a.m. to 10:00 p.m.	55	60	65	70	75
		10:00 p.m. to 7:00 a.m.	50	55	60	65	70
	Non-Residential	At Any Time	65	70	75	80	85

¹ The noise level exceeded "n" percent of the time during the measurement period. L₂₅ is the noise level exceeded 25% of the time.

² City of Mission Viejo Municipal Code, Section 9.22.025 (Appendix 3.1 of the Noise Analysis included in Appendix I). (Urban Crossroads, 2019d)

- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
 - are less than 60 dBA L₅₀ and the Project creates a readily perceptible 5 dBA L₅₀ or greater Project-related noise level increase; or
 - range from 60 to 65 dBA L₅₀ and the Project creates a barely perceptible 3 dBA L₅₀ or greater Project-related noise level increase; or
 - already exceed 65 dBA L₅₀, and the Project creates a community noise level impact of greater than 1.5 dBA L₅₀ (FICON, 1992).

The operational noise level calculations shown on Table 3-19 account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The Project’s combined operational noise levels at the nearby sensitive receiver locations are shown to range from 46.3 to 59.7 dBA Leq. Based on the results of this analysis, the Project operational noise levels associated would not exceed the City of Mission Viejo Municipal Code exterior noise level standards during daytime hours and nighttime hours resulting in a less than significant impact.



Table 3-19 Unmitigated Project Operational Noise Levels

Receiver Location ¹	Noise Source ²	Project Operational Noise Levels (dBA) ³				
		L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (<1 min)
R1	Roof-Top Air Conditioning	29.1	30.8	32.1	32.4	32.9
	Parking Lot Vehicle Movements	10.3	11.3	16.3	22.3	33.2
	Dog Run	0.0	0.0	0.0	6.0	16.7
	Outdoor Pool Activity	4.1	7.1	10.4	13.5	18.9
	Combined Noise Level:	29.2	30.9	32.2	32.9	36.2
R2	Roof-Top Air Conditioning	35.0	36.7	38.0	38.3	38.8
	Parking Lot Vehicle Movements	16.0	17.0	22.0	28.0	38.9
	Dog Run	0.0	0.8	6.6	14.3	25.0
	Outdoor Pool Activity	8.4	11.4	14.7	17.8	23.2
	Combined Noise Level:	35.1	36.8	38.1	38.7	42.0
R3	Roof-Top Air Conditioning	35.0	36.7	38.0	38.3	38.8
	Parking Lot Vehicle Movements	13.0	14.0	19.0	25.0	35.9
	Dog Run	14.5	17.1	22.9	30.6	41.3
	Outdoor Pool Activity	27.8	30.8	34.1	37.2	42.6
	Combined Noise Level:	35.8	37.7	39.6	41.3	46.4
R4	Roof-Top Air Conditioning	40.9	42.6	43.9	44.2	44.7
	Parking Lot Vehicle Movements	19.5	20.5	25.5	31.5	42.4
	Dog Run	30.2	32.8	38.6	46.3	57.0
	Outdoor Pool Activity	40.9	43.9	47.2	50.3	55.7
	Combined Noise Level:	44.1	46.5	49.3	52.5	59.6
R5	Roof-Top Air Conditioning	45.8	47.5	48.8	49.1	49.6
	Parking Lot Vehicle Movements	36.3	37.3	42.3	48.3	59.2
	Dog Run	2.5	5.1	10.9	18.6	29.3
	Outdoor Pool Activity	20.5	23.5	26.8	29.9	35.3
	Combined Noise Level:	46.3	47.9	49.7	51.8	59.7

¹ See for the receiver and noise source locations.

² Reference noise sources as shown on Table 10-1 of Appendix I.

³ Operational noise level calculations are provided in Appendix 10.1 of Appendix I. (Urban Crossroads, 2019d, Table 10-2)

To describe the Project operational noise level contributions, the Project’s operational noise levels are combined with the reference ambient noise levels measurements for the nearby receiver locations potentially impacted by the Project’s operational noise sources. As indicated on Tables 10-4 and 10-5 of the Noise Analysis included in Appendix I, the Project would contribute a daytime operational noise level increase of up to 0.2 dBA Leq and a nighttime operational noise level increase of up to 1.2 dBA Leq at the sensitive receiver locations. Since the Project-related operational noise level contributions would not exceed the established significance criteria, the increases at the sensitive receiver locations would not be substantial and would be less than significant.

Traffic Noise to Off-Site Receptors

Traffic generated by the operation of the Project would influence the traffic noise levels in surrounding off-site areas. Trip generation estimates for the Project were prepared by David Evans and Associates, Inc. in the *Trip Generation Analysis Version 3 – Confluent Senior Living, Mission Viejo, California* included in



Appendix K of this IS/MND. As further discussed in the Transportation section of this IS/MND, the daily trip generation for the existing commercial/retail use within the Project site is 1,451 trips, while the Project is anticipated to result in approximately 432 daily trips based on the proposed assisted living use, and as a result, would generate 1,019 fewer daily trips than the existing land use. Therefore, lower off-site traffic noise levels would be generated by the Project compared to the existing use, and as such, unmitigated off-site traffic noise level impacts would be less than significant with the Project and no further analysis is required.

On-Site Noise Impacts

The primary source of traffic noise affecting the Project site is anticipated to be from I-5 Freeway and Marguerite Parkway. The Project would also experience some background traffic noise impacts from Avery Parkway, however, due to the distance and intervening structures to this roadway, traffic noise on Avery Parkway is not anticipated to make a significant contribution to the exterior noise levels generated by I-5 and Marguerite Parkway at the Project site.

The analysis presented on Table 3-20, Exterior Traffic Noise Levels, indicates that that the future unmitigated on-site exterior traffic noise levels are expected to approach 54.6 dBA CNEL in the outdoor living area (common pool area) of the Projects site, which satisfies the 65 dBA CNEL exterior noise level criteria of the General Plan Noise Element for residential, or other noise-sensitive, uses. Therefore, future exterior traffic noise impacts would be less than significant. The future on-site exterior traffic noise level analysis includes the attenuation provided by the Project building itself.

Table 3-20 Exterior Traffic Noise Levels

On-Site Receiver Location	Roadways	Individual Exterior Noise Level (dBA CNEL)	Combined Exterior Noise Level (dBA CNEL)	Exterior Noise Level Threshold (dBA CNEL)	Threshold Exceeded?
Outdoor Pool Area	I-5	53.5	54.6	65	No
	Marguerite Pkwy.	48.1			

(Urban Crossroads, 2019d)

To ensure that the interior noise levels comply with the City of Mission Viejo interior noise level standards, future noise levels were calculated at the building facades. shows that the future unmitigated exterior noise levels at the western building facade are expected to range from 72.3 to 72.5 dBA CNEL. Table 3-21, Unmitigated Interior Noise Levels (CNEL), shows that the estimated interior noise levels using typical building construction and standard windows would provide an interior noise level reduction of 25 dBA. With the standard windows, units facing Marguerite Parkway would experience interior levels ranging from 47.3 to 47.5 dBA CNEL. This exceeds the City of Mission Viejo 45 dBA CNEL interior noise level standards and represents a potentially significant impact requiring interior noise mitigation.



Table 3-21 Unmitigated Interior Noise Levels (CNEL)

Building (Facade)	Floor	Noise Level at Facade ¹	Required Interior NR ²	Typical Interior NR ³	Interior Noise Level	Threshold	Threshold Exceeded?
Western Façade	1	72.5	27.5	25.0	47.5	45	Yes
	2	72.4	27.4	25.0	47.4	45	Yes
	3	72.3	27.3	25.0	47.3	45	Yes

¹ Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).

² Noise reduction required to satisfy the 45 dBA CNEL interior noise standard for residential uses.

³ Typical building construction interior noise reduction with the standard windows.

"NR" = Noise Reduction
(Urban Crossroads, 2019d)

The interior noise level is the difference between the predicted exterior noise level at the building facade and the noise reduction of the structure. Typical building construction would provide a Noise Reduction (NR) of approximately 12 dBA with "windows open" and a minimum 25 dBA noise reduction with "windows closed." However, sound leaks, cracks and openings within the window assembly can greatly diminish its effectiveness in reducing noise. Several methods are used to improve interior noise reduction, including: (1) weather-stripped solid core exterior doors; (2) upgraded dual glazed windows; (3) mechanical ventilation/air conditioning; and (4) exterior wall/roof assemblies free of cut outs or openings. (Urban Crossroads, 2019d)

To describe the potential interior noise mitigation, the noise reduction characteristics of the Project were evaluated by combining the transmission loss of each of the building components that make up the building. Each unique component has a transmission loss value. For residential homes, the critical building components include the roof, walls, windows, doors, and attic configuration and insulation characteristics. The total noise reduction is dependent upon the transmission loss of each element and the surface area of that element in relation to the total surface area of the room. To account for the acoustic energy absorbed within a room, the absorption coefficients for individual surface areas such as drywall and carpet are used to calculate the interior room effects. The calculated building noise reduction includes both the transmission loss associated with the exterior wall assembly and the room absorption characteristics.

Noise reduction calculations have been based on the architectural floor plans for the Project. The floor plans for the Project bedrooms were used to estimate the "windows closed" interior noise levels. To satisfy the City of Mission Viejo NR requirements for exterior noise levels, the calculations were completed using standard windows with a minimum sound transmission class (STC) of 27, in addition to upgraded windows with minimum STC ratings of 30. Table 3-22, Noise Reduction Calculations, shows the calculated interior noise reductions. The interior noise reduction calculations are included in Appendix 8.2 of the Noise Analysis included in Appendix I.



Table 3-22 Noise Reduction Calculations

Floor Plan	Sample Rooms ¹	Calculated Noise Level Reduction (STC 27) "Standard Windows" ²	Calculated Noise Level Reduction (STC 30) "Upgraded Windows" ²
MC-Studio (420 sf)	Living/Sleeping	28.2	30.3
MC-1BR (634 sf)	Bedroom	26.5	28.7
AL-1BR (445 sf)	Living/Sleeping	28.2	30.3
AL-1BR (670 sf)	Bedroom	26.5	28.7
AL-2BR (899)	Bedroom 1	26.5	28.7
	Bedroom 2	26.5	28.7
AL-Studio (670 sf)	Living/Sleeping	27.8	30.2
AL-1BR (807 sf)	Bedroom	27.7	29.8
AL-1BR (826 sf)	Bedroom	27.4	29.2
AL-2BR (1,072 sf)	Bedroom 1	27.0	29.2
	Bedroom 2	27.0	29.2
AL-2BR (1,191 sf)	Bedroom 1	27.8	29.9
	Bedroom 2	27.2	29.7

MC- Memory Care; AL – Assisted Living; STC: Sound Transmission Class; BR: bedroom; sf: square feet)

¹ Sample is based on the interior habitable room(s) with a high number of exterior walls and openings (windows, doors, etc.).

² Interior noise reduction calculations included in Appendix 8.2 of the Noise Analysis included in Appendix I (Urban Crossroads, 2019d)

Using the calculated interior noise levels based on the noise reduction calculations for individual rooms within the Project, the interior noise levels with upgraded windows can be calculated. Table 3-23, Mitigated Interior Noise Levels (CNEL), presents the mitigated interior noise levels (CNEL) with the incorporation of upgraded windows and doors required to satisfy the 45 dBA CNEL interior noise level standard, as further specified in MM NSE-1. Table 3-23 shows that the interior noise levels with mitigation will range from 43.7 to 43.8 dBA CNEL. The interior noise level analysis shows that the City of Mission Viejo 45 dBA CNEL residential interior noise standards can be satisfied using windows and glass doors in residential units (all floors) facing Marguerite Parkway and I-5, as shown on Figure 3-10, On-Site Interior Traffic Noise Mitigation. All other units require standard STC ratings of 27.

Table 3-23 Mitigated Interior Noise Levels (CNEL)

Building (Facade)	Floor	Noise Level at Facade ¹	Required Interior NR ²	Minimum Calculated Interior NR ³	Upgraded Windows ⁴	Interior Noise Level ⁵	Threshold	Threshold Exceeded?
Western Façade	1	72.5	27.5	28.7	Yes	43.8	45	No
	2	72.4	27.4	28.7	Yes	43.7	45	No
	3	72.3	27.3	28.7	Yes	43.7	45	No

NR - Noise Reduction

¹ Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).

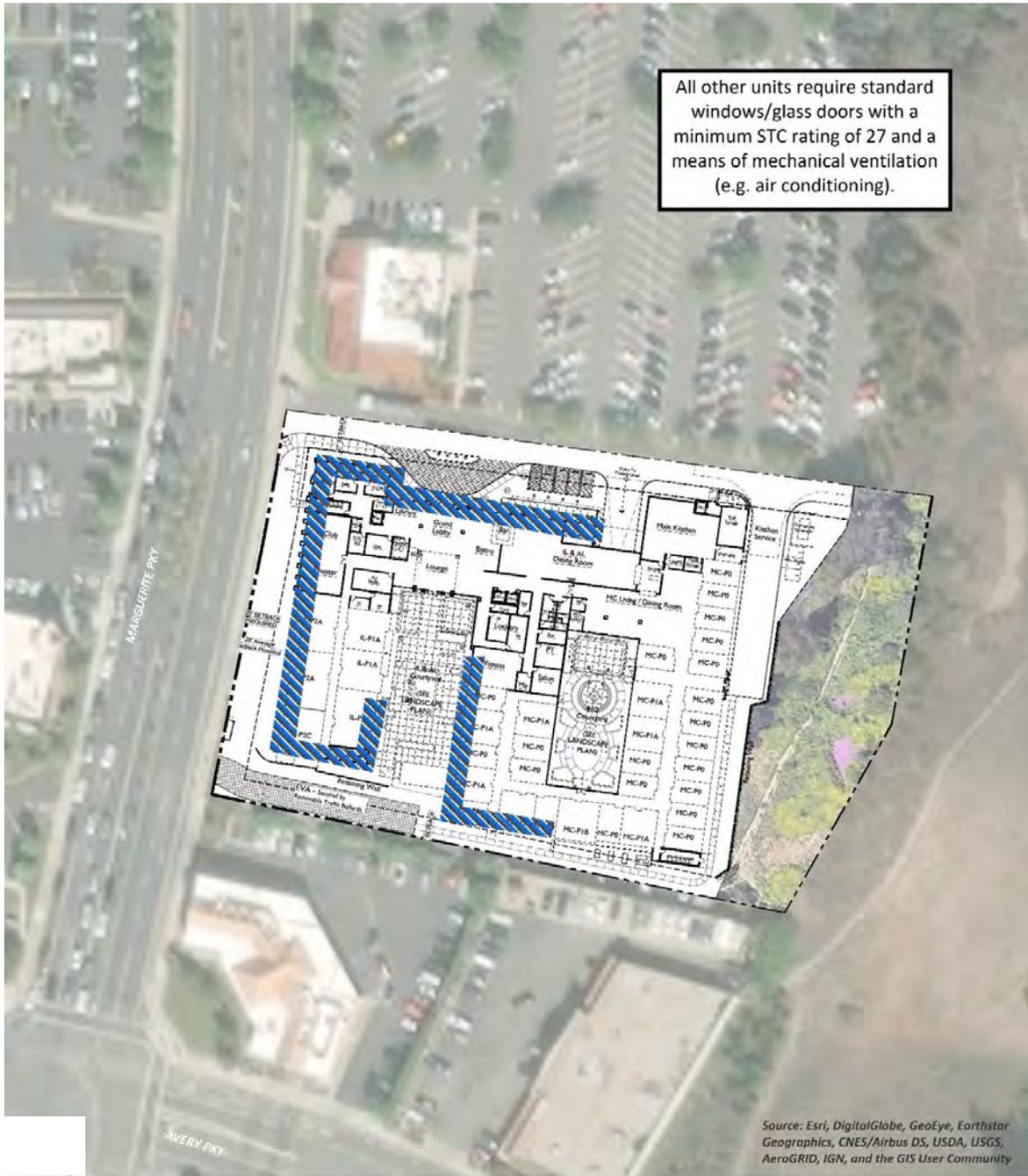
² Noise reduction required to satisfy the 45 dBA CNEL interior noise standard for residential uses.

³ Calculated minimum interior noise reduction with the recommended windows (Table 3-20).

⁴ Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?

⁵ Estimated interior noise level with minimum STC rating for all windows.

Source: (Urban Crossroads, 2019d, Table 8-4)



LEGEND:

 Windows of residential units requiring upgraded, minimum STC ratings of 30 facing Marguerite Parkway and I-5.

Source(s): Urban Crossroads (08-15-2019)

Figure 3-10



Not to Scale



ON-SITE INTERIOR TRAFFIC NOISE MITIGATION



In summary, during construction and operation, the Project would not generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of established standards established. Therefore, this impact is less than significant and no mitigation is required.

The Project would be exposed to traffic noise levels from I-5 and Marguerite Parkway that would cause interior noise levels in excess of the City's interior noise standards if appropriate noise reduction measures are not implement. MM Noise 1 identifies noise reduction measure that would be implemented to ensure interior noise levels are met.

b) *Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?*

Less than Significant Impact. The City of Mission Viejo has not identified or adopted specific, quantified vibration level standards. However, the United States Department of Transportation Federal Transit Administration (FTA) provides guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines allow 80 VdB for residential uses and buildings where people normally sleep, and 83 VdB for institutional land uses typically occupied during the daytime hours. Construction activities can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. The FTA guidelines provide a substantiated basis for determining the relative significance of Project vibration impacts due to on-site construction activities. (Urban Crossroads, 2019d)

Construction-Related Vibration Impacts

Typical construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from typical Project construction activities would cause only intermittent, localized intrusion. The Project's typical construction activities most likely to cause vibration impacts are:

- **Heavy Construction Equipment.** Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage.
- **Trucks.** Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from typical construction activities occurring within the Project site were estimated by data published by the FTA. Using the vibration source level of construction equipment provided on Table 6-4 of the Noise Analysis included in Appendix I of this IS/MND, and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. (Urban Crossroads, 2019d)

Table 3-24, Unmitigated Typical Construction Equipment Vibration Levels, shows the highest construction vibration levels are expected to approach 49.4 VdB at sensitive receiver locations (e.g., residential, school) and up to 77.0 VdB at non-noise-sensitive receiver location (e.g., commercial, office), and will satisfy the 80 VdB residential and 83 VdB institutional thresholds identified by the Federal Transit Administration, and as such, would result in less than significant impacts. The impacts at the site of the closest sensitive



receivers are unlikely to be sustained during the entire construction period; they would occur only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

Table 3-24 Unmitigated Typical Construction Equipment Vibration Levels

Receiver Location ¹	Land Use	Distance to Construction Activity (Feet)	Receiver Vibration Levels (VdB) ²					Threshold (VdB)	Threshold Exceeded? ³
			Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels		
R1	School	864'	11.8	32.8	39.8	40.8	40.8	83	No
R2	School	449'	20.4	41.4	48.4	49.4	49.4	83	No
R3	Residential	463'	20.0	41.0	48.0	49.0	49.0	80	No
R4	Commercial	78'	43.2	64.2	71.2	72.2	72.2	NA	NA
R5	Commercial	54'	48.0	69.0	76.0	77.0	77.0	NA	NA

¹ Noise receiver locations are shown on Figure 3-8.

² Based on the Vibration Source Levels of Construction Equipment included on Table 6-4 of the Noise Analysis in Appendix I.

³ Does the vibration level exceed the FTA acceptable vibration level for the given land use?

NA = The FTA does not identify a vibration level threshold for the given use unless it contains vibration-sensitive activity or equipment within the building.

(Urban Crossroads, 2019d, Table 11-9)

An analysis of potential vibration levels due to pile driving, using impact, sonic, and drilling methods, shows that unmitigated vibration levels with any method would be expected to result in unmitigated vibration levels ranging from 39.4 to 90.4 VdB, as shown on Table 3-25, Unmitigated Pile Driving Vibration Levels. The FTA identifies vibration standards for residential and institutional land uses, which are identified and represented by receiver locations R1 to R3 in this analysis. Based on the FTA’s criteria for residential and institutional uses, pile driving vibration levels at R1 to R3 ranging from 39.4 to 67.1 VdB would be expected to remain below the FTA’s vibration thresholds, and as such, represent a less than significant impact.

Table 3-25 Unmitigated Pile Driving Vibration Levels

Receiver Location ¹	Land Use	Distance to Pile Driving Activity (Feet)	Receiver Vibration Levels (VdB) ²				Threshold (VdB)	Threshold Exceeded? ³
			Impact Pile Driver	Sonic Pile Driver	Caisson Drilling	Highest Vibration Levels		
R1	School	962'	56.4	45.4	39.4	56.4	83	No
R2	School	425'	67.1	56.1	50.1	67.1	83	No
R3	Residential	450'	66.3	55.3	49.3	66.3	80	No
R4	Commercial	71'	90.4	79.4	73.4	90.4	NA	NA
R5	Commercial	300'	71.6	60.6	54.6	71.6	NA	NA

¹ Noise receiver locations are shown on Exhibit 10-A.

² Based on the Vibration Source Levels of Construction Equipment included on Table 6-4 of the Noise Analysis included in Appendix I.

³ Does the vibration level exceed the FTA acceptable vibration level for the given land use?

NA = The FTA does not identify a vibration level threshold for the given use unless it contains vibration-sensitive activity or equipment within the building.

(Urban Crossroads, 2019d, Table 11-12)



Operational Vibration Impacts

The Project operational activities do not represent sources of high ground-borne vibration levels. Temporary delivery truck activities on-site may result in short-term ground-borne vibration levels, which would be dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for heavy trucks at normal traffic speeds do not exceed 65 VdB at 25 feet. Therefore, given that delivery trucks would be traveling on-site at lower speeds, unmitigated Project-related operational vibration levels at the nearby receiver locations are anticipated to remain below 65 VdB. As such, unmitigated Project operational vibration levels would remain below the FTA vibration thresholds of 80 VdB at nearby sensitive receiver locations and 83 VdB at non-residential, institutional receiver locations. (Urban Crossroads, 2019d).

Based on the analysis above, unmitigated Project construction and operational vibration levels would remain below the FTA vibration threshold. The Project result not in generation of excessive groundborne vibration or groundborne noise levels. This impact would be less than significant and no mitigation is required (Urban Crossroads, 2019d).

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

No Impact. The Project site is located approximately 14 miles southeast of John Wayne Airport. Therefore, the Project site is not located within two miles of a public airport or the vicinity of a private airstrip, and as such, no impact related to the exposure of people residing or working in the Project area to excessive airport related noise levels would occur. No mitigation is required.

Mitigation Measures

MM NSE-1 The Project residential units are estimated to require a Noise Reduction (NR) of up to 27.5 dBA and a windows-closed condition requiring a means of mechanical ventilation (e.g. air conditioning). Since standard building construction typically provides a NR of 25 dBA, upgraded windows are required to provide the necessary NR, and reduce exterior traffic noise levels approaching 72.5 dBA CNEL at the building façade to satisfy the interior 45 dBA CNEL standard. The following NR measures are required to satisfy the 45 dBA CNEL interior noise level standard and shall be confirmed by the City of Mission Viejo prior to issuance of building permits:

- **Windows & Glass Doors**
 - Windows and glass doors of residential units (all floors) facing Marguerite Parkway and I-5, as shown on Exhibit ES-A, require upgraded minimum sound transmission class (STC) ratings of 30;
 - All other units require windows and glass doors with minimum STC ratings of 27. All windows and glass doors shall be well-fitted, well-weather-stripped assemblies.
- **Exterior Doors (Non-Glass).** All exterior doors shall be well weather-stripped. Well-sealed perimeter gaps around the doors are essential to achieve the optimal STC rating. All units require exterior doors with minimum STC ratings of 27.



- **Walls.** At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- **Roof.** Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specification or well-sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.
- **Ventilation.** Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

MM NSE-2

The use of non-impact pile driving methods (e.g., drilling) shall be required when located within 150 feet of occupied commercial buildings represented by receiver location R4 on Figure 3-4) (commercial uses south of the Project site). This requirement shall be included on the contractor specifications and verified by the Director of Community Development, or designee, prior to issuance of a grading permit.

**3.4.14 Population and Housing**

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>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)?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) <i>Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 would involve demolition of the existing commercial/retail building at the Project site, which provides employment opportunities. The California Department of Finance (DOF) estimates that, as of January 2019, the City of Mission Viejo had a population of 96,434 residents and a housing stock of 34,958 dwelling units (DOF, 2019a) (DOF, 2019b). The City's labor force consisted of 49,700 persons, of which approximately 48,200 individuals were employed as of June 2019 (EDD, 2019).

The Project would provide housing for approximately 166 elderly individuals (132 units with 166 beds). The Project Applicant has indicated that it is typical for their residents to live within 3- to 5-miles of the senior living community. Therefore, it is likely the number of new residents to the City would be much less than the 166 residents that would live at the proposed facility. For purposes of analysis it is conservatively assumed that the 166 residents are new residents in the City of Mission Viejo. An increase of 166 residents in the City would represent a negligible increase (approximately 0.2 percent) in the existing population in the City, and would also represent approximately 0.2 percent of the City's projected 2040 population as presented in the jurisdictional growth forecasts in SCAG's 2016-2040 RTP/SCS (estimated to be 96,600 individuals) (SCAG, 2016). While the Project would eliminate existing employment-generating uses, it would provide employment opportunities for up to 85 individuals (full- and part-time positions) to serve the Project community residents. It is expected that the new positions would be filled by the local or regional labor pool and would not represent an indirect increase in population in the region.

Therefore, the Project would not induce substantial unplanned population growth in the area, either directly or indirectly. This impact would be less than significant and no mitigation is required.

b) *Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

No Impact. The Project includes demolition of an existing commercial/retail building. The Project site does not contain any housing and there are no people living at the Project site that would be displaced by the Project. No impact would occur and no mitigation is required.



Mitigation Measures

Implementation of the Project would result in less than significant impacts to population and housing; therefore, no mitigation measures are required.



3.4.15 Public Services

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
<i>a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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>				
<i>Fire protection?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Police protection?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Schools?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Parks?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Other public facilities?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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: a) Fire protection?

No Impact. Orange County Fire Authority (OCFA) provides fire protection services to the Project site. OCFA is a regional fire service agency that serves 23 cities in Orange County and all unincorporated areas. The City of Mission Viejo is a partner city and is located in Division III. The OCFA protects over 1.8 million residents with its 79 fire stations located throughout Orange County (OCFA, 2019a). The OCFA provides fire protection and emergency medical services (EMS) to all areas in its jurisdiction. Services provided include structural fire protection; emergency medical and rescue services; hazard inspections and response; and public education. The OCFA also participates in disaster planning related to emergency operations for high-occupancy areas and school sites. OCFA maintains mutual aid agreements with all other cities in Orange County and with the State of California. OCFA also maintains mutual and/or automatic aid agreements with Los Angeles, Riverside, San Bernardino, and San Diego Counties; the Camp Pendleton Fire Department; and the U.S. Forest Service.

The closest fire stations to the Project site are OCFA Fire Station No. 9 located at 9 Shops Boulevard in the City of Mission Viejo (approximately 0.5-mile north of the Project site), and Fire Station No. 39 located at 58 Station Way in the unincorporated community of Ladera Ranch (approximately 2.4-mile northeast of the Project site) (OCFA, 2019b). In addition to these stations, resources and personnel may be dispatched from other OCFA stations, as necessary, to respond to fire and emergency medical calls. Due to Fire Station No. 9’s proximity to the Project site, this station is likely to service the Project site. Fire Station No. 9 is staffed with 6 Fire Captains, 6 Fire Apparatus Engineers, and 12 Firefighters, and apparatus includes 9 medic engines, 9 trucks, and 9 swift water.

As identified above, the Project would accommodate 166 beds/residents; however, the majority of the Project residents are expected to already live in the vicinity of the Project site. Additionally, OCFA currently provides fire protection service to the existing uses at the Project site, which would be replaced by the proposed congregate care/assisted living facility. Although the relatively small number of residents at the Project site is not anticipated to generate the need for new firefighters and other personnel, the Project would require fire protection services, including administrative tasks associated with approval and



construction of the Project (e.g., building plan check) and response to fire service calls once the Project is occupied.

The Project would be required to comply with applicable OCFA and City of Mission Viejo codes, ordinances, and regulations regarding fire prevention and suppression measures; fire hydrants and sprinkler systems; emergency access; and other similar requirements. Notably, the Project would be equipped with fully automatic fire sprinkler systems for fire protection and a fire hydrant is located along Marguerite Parkway near the southwest corner of the Project site. Access to the Project site from Marguerite Parkway would be provided from two driveways along the southern and northern Project site boundaries and the southern access driveway is for emergency access only, as further discussed in the Transportation section of this IS/MND. The demand for fire protection services resulting from the Project would not require the construction of new or alteration of existing fire protection facilities to maintain an adequate level of fire protection service. Therefore, no physical impacts associated with the provision of fire protection services would occur. No impact would occur and no mitigation is required.

b) Police protection?

No Impact. Police protection services are provided to the City of Mission Viejo by the Orange County Sheriff's Department (OCSD). OCSD's Southeast Operation Division provides police services to Lake Forest, Mission Viejo, and Rancho Santa Margarita (OCSD, 2019) and therefore is responsible for serving the Project site. The Saddleback Station is located at 20202 Windrow, in the City of Lake Forest. The Southeast Operations Division provides law enforcement services to more than 280,753 residents and employs approximately 223 staff members, 168 of whom are sworn peace officers; this Division deploys approximately 65 patrol cars during each 24-hour period (OCSD, 2019). Consequently, the current officer-to-resident ratio for the Southeast Operation Division is approximately 0.6 officers per 1,000 residents.

The Project would replace the existing commercial/retail uses at the site, which currently require OCSD services. As identified above, the Project would provide 166 beds for senior citizens. Although the relatively small number of residents at the Project site are not anticipated to generate the need for new officers and other personnel, the Project would require police protection services, as with existing conditions. The Project incorporates safety features such as setbacks from the street and well-lit exterior spaces with visual exposure, would have a continual presence of staff members 24 hours per day, and would have a steady presence of residents and visitors during daytime hours. The increased demand for police protection services resulting from the Project would not be substantial compared to existing conditions, and would not require the construction of new or alteration of existing police protection facilities to maintain an adequate level of police protection service. Therefore, no physical impacts associated with the provision of fire protection services would occur. No impact would occur and no mitigation is required.

c) Schools?

No Impact. The City of Mission Viejo is served by the Saddleback Valley Unified School District (SVUSD). In the 2017–2018 school year, approximately 27,378 students from kindergarten through 12th grade were enrolled in one of SVUSD's 35 public schools (CDE, 2019). The Project involves the development of a congregate care/assisted living facility for senior citizens and would not generate additional students in the SVUSD. Additionally, as previously discussed, it is expected that the new jobs that would be created by the Project would be filled by existing residents in the area. Appropriate developer impact fees, as required by State law, shall be assessed, and paid by the Project Applicant to the SVUSD. Section 65995(b)



of the California Government Code establishes the base amount of allowed developer fees and allows increases in the base fee every two years. School districts are placed into a specific “level” based on school impact fee amounts that are imposed on the development. The Project would not require the construction of new or alteration of existing school facilities; therefore, no physical impacts associated with the provision of school services would occur. No impact would occur and no mitigation is required.

d) Parks?

No Impact. The City’s Recreation and Community Services Department operates and manages parks and recreation facilities throughout the City of Mission Viejo. According to the City’s General Plan Conservation and Open Space Element, Mission Viejo has a parkland policy of a minimum of five usable acres of parkland for every 1,000 persons living in the City (City of Mission Viejo, 2013a). Parkland includes mini-parks, neighborhood parks, community parks, open space linkages, regional parks, joint-use schools, and trails. The closest parks are Rolling Hills Park (0.90 mile west of the Project site), Boreal Park (1.3 miles east), Hidden Trails Park (1.5 miles northwest), Hidden Hills Park (1.40 miles southwest), and Cordova Park (1.6 miles northeast) (Google Earth Pro, 2019).

As identified above, the Project would provide 166 beds for senior citizen residents; however, it is anticipated that the majority of the residents would already live in the City or surrounding areas. Additionally, as described in Section 2.3.3, Landscaping/Courtyards, Walls, and Lighting, the Project would provide two private courtyard spaces, which would allow for secure outdoor recreational activities for the residents. The Project would not contribute to a substantial increase in the population necessitating either construction of new or alteration of existing park facilities to maintain an adequate level of service. Therefore, no physical impacts associated with the provision of park services would occur. No impact would occur and no mitigation is required.

e) Other public facilities?

Less than Significant Impact. Other public facilities that may be used by Project residents include libraries. The Mission Viejo Library is located at 100 Civic Center, Mission Viejo, CA 92691 (3.5 miles north of the Project site). OC Public Libraries (OCPL) has a network of 33 libraries throughout Orange County, and two OCPL branches are located in the Project vicinity (OCPL, 2019). Laguna Hills Technology Library is located at 25555 Alicia Parkway, approximately 3.5 miles northwest of the Project site. The Ladera Ranch Library is located at 29551 Sienna Parkway, approximately 2 miles east of the Project site. As identified above, the Project would provide 166 beds for senior citizen residents; however, it is anticipated that the majority of the residents would already live in the City or surrounding areas. The Project would not contribute to a substantial increase in the population necessitating either construction of new or alteration of existing library facilities to maintain an adequate level of service. Therefore, no physical impacts associated with the provision of library services would occur. No impact would occur and no mitigation is required.

Mitigation Measures

Implementation of the Project would have no physical impacts relates to the construction of new or alteration of existing public service facilities; therefore, no impact would occur and no mitigation is required.



3.4.16 Recreation

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) <i>Does the project include recreational facilities or require the construction of or expansion of recreational facilities which might have an adverse physical effect on the environment?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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. As discussed under “Parks” above, implementation of the Project, which would provide 166 beds for senior citizen residents (the majority of which already live in the area), would not substantially increase the demand for park and recreation facilities. Similarly, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. This impact is less than significant and no mitigation is required.

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

Less than Significant Impact. As described in 2.3.3, Landscaping/Courtyards, Walls, and Lighting, and shown on Figure 2-8, Conceptual Landscape Plan, the Project would include two private courtyards and other outdoor patio areas for the exclusive use of future residents. The courtyards would be provided at the ground level, in the central portion of the building. The eastern courtyard for MC residents would include a central water feature with a surrounding bench and seat wall, a putting green, dining area and barbeque, lounge area with a shade structure, walking paths and seating areas. The western courtyard for AL residents would include a pool, putting green, dog run, a fire pit with lounge seating, dining area and barbeque, and shaded outdoor lounge areas.

The physical impacts resulting from the construction of these facilities have been addressed through the analysis presented throughout this IS/MND and would be less than significant. No additional impacts would occur and no additional mitigation is required.

Mitigation Measures

Implementation of the Project would have a less than significant impact to Recreation. Thus, no mitigation measures are required.



3.4.17 Transportation

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Conflict with an applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) <i>Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) <i>Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) <i>Result in inadequate emergency access?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Requirement

RR TRF-1 Pursuant to Section 14.01.202 of the City of Mission Viejo Municipal Code, the Project Applicant shall obtain a permit from the Public Works Department prior to initiating any construction activities along Marguerite Parkway. Among other requirements, the permit application shall include a Traffic Control Plan, which shall describe in detail safe detours (for vehicles, pedestrians, and bicyclists) and shall provide temporary traffic control during construction activities.

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

No Impact.

Roadways and Intersections

The General Plan Circulation Element includes Goal 2 to “*Protect the City’s investment in its circulation system by assessing and mitigating the transportation impacts of new development proposed within and outside the City of Mission Viejo*” (City of Mission Viejo, 2013d). A Trip Generation Analysis, dated October 30, 2019, was prepared for the Project by David Evans and Associates, Inc. (DEA) to review the trip generation of the existing uses at the Project site, and the trip generation and trip distribution of the Project to local area roadways. This report is included as Appendix K of this IS/MND and its findings are incorporated into the analysis presented herein. Trip generation represents the amount of traffic that is attracted to and produced by a development project.

Under existing conditions, the Project site consists of an approximately 38,600 sf, two-story mixed-use commercial/retail building. Based on the land use-specific vehicle trip generation rates published by the Institute of Transportation Engineers (ITE), the existing land use is identified under Category 820 and generates 1,451 daily trips, including 36 trips during the peak morning (AM) hour and 146 trips during the peak evening (PM) hour. (DEA, 2019, Table A)



Based on the land use-specific vehicle trip generation rates published by ITE, the proposed land use (Assisted Living) is identified under Category 254 and, with 166 beds, is calculated to generate 432 daily trips, including 32 trips during the AM peak hour and 44 trips during the PM peak hour (DEA, 2019, Table B). Transportation to external events and appointments would be available to residents to reduce reliance on private vehicles.

As shown in Table 3-26, *Trip Generation Comparison*, the Project would generate 1,109 less daily trips, 4 less trip during the AM peak hour, and 102 less trips during the PM peak hour. Implementation of the Project would reduce daily and peak hour traffic along roadways and at intersections. Further consistent with Policy 7.1 of the General Plan Circulation Element, removal of one of the existing driveways serving the Project site along Marguerite Parkway would assist in maintaining a desired quality of flow.

Table 3-26 Trip Generation Comparison

Land Use	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
		In	Out	Total	In	Out	Total
Mixed-Use Commercial/Retail	1,451	22	14	36	70	76	146
Assisted Living (proposed)	432	20	12	32	17	27	44
Difference	(1,019)	(2)	(2)	(4)	(53)	(49)	(102)

Source: (DEA, 2019, Table C)

The Orange County Congestion Management Program (CMP) was originally adopted in 1991 and was updated most recently in October 2017. The Orange County Transportation Authority (OCTA) is the designated Congestion Management Agency (CMA) for the County. As a result, the OCTA is responsible for developing, monitoring, and updating (biennially) the Orange County’s CMP. I-5, which is part of the CMP roadway network, is the nearest freeway facility to the Project site (OCTA, 2017, Figure 2). Because the Project would generate less traffic than the existing commercial/retail uses operating at the Project site, the Project would not increase traffic on any CMP facility and would not conflict with the CMP.

Transit Facilities

The Orange County Transit Authority (OCTA) provides transit (bus) services to the Project area. There are bus stops approximately 350 feet north and south of the Project site on both sides of Marguerite Parkway, including at the intersection of Marguerite Parkway and Avery Parkway. The Project does not propose to install a bus stop nor does the Project propose to modify the existing bus stops. However, the drop-off area at the main entrance of the Project entry has been designed to accommodate a 22-passenger miniature bus, which could accommodate an OCTA Access (or similar service) bus, and/or similar shuttle vehicles operated by the facility to transport residents to external events and appointments. This Project feature and location of the Project adjacent to existing bus stops is consistent with the General Plan Circulation Element Policy 13.5 to “ensure accessibility of transit-dependent populations, including students, the elderly, and disabled persons, to public transportation” and Policy 13.8 to “encourage new development to incorporate design techniques that facilitate transit services, such as accessibility to transit routes, bike trails, pedestrian walkways and bus stops.”

Bicycle and Pedestrian Facilities

The General Plan Circulation Element Goal 4 is to “protect and encourage non-motorized transportation such as bicycle, pedestrian, and equestrian travel.” Goal 16 is to “plan and provide a pedestrian network



that links residential, employment, schools and commercial facilities to public sidewalks and bus stop locations.” There are Class II On-Road (Striped Lane) Bike Lanes located in proximity to the Project site. According to City of Mission Viejo General Plan Figure C-2, Bikeway Plan, Class II Bike Lanes are located along Marguerite Parkway and Avery Parkway. Additionally, there are sidewalks along both sides of these streets in the vicinity of the Project site. Consistent with Goal 4, the Project promotes bicycle travel with the provision of bicycle racks at ground level (near the service access drive) and employee bike storage in the underground parking level. Further pedestrian pathways would be provided on-site to provide safe and efficient access to the existing sidewalk along Marguerite Parkway, and to the bus stops along Marguerite Parkway (consistent with Policy 13.8 and Goal 16 of the Circulation Element). The Project would not alter the lane geometrics along Marguerite Parkway; however, an existing driveway at the Project site would be eliminated, reducing the potential for conflicts between pedestrians and bicyclists entering and existing the site. The emergency access driveway at the southern end of the Project site would be limited to emergency vehicles.

The Project’s proposed frontage improvement along Marguerite Parkway (e.g., relocation of the catch basin and driveway modifications) may temporarily interfere with the use of the sidewalks and Class II Bike Lanes located along Marguerite Parkway. However, as required by Section 14.01.202 of the City’s Municipal Code, the Project Applicant would prepare a Traffic Control Plan prior to obtaining a permit to conduct construction activities along Marguerite Parkway. The Traffic Control Plan would describe in detail safe detours for vehicles, pedestrians, and bicyclists, and would address temporary traffic control during construction activities potentially impacting Marguerite Parkway. With adherence to this requirement, as required by RR TRF-1, temporary impacts to pedestrians and bicyclists would be less than significant.

Based on the foregoing analysis, the Project would not conflict with any applicable program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. No impact would result and no mitigation is required.

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

No Impact. On December 28, 2018, the State approved updates to the CEQA Guidelines, which entailed changes to the thresholds of significance for the evaluation of impacts to transportation. Updates to the CEQA Guidelines included the addition of CEQA Guidelines Section 15064.3, of which Subdivision b establishes criteria for evaluating a project’s transportation impacts based on project type and using automobile Vehicle Miles Travelled (VMTs) as the metric. As a component of OPR’s revisions to the CEQA Guidelines in December 2018, lead agencies will be required to adopt VMT thresholds of significance by July 2020. At the time this IS/MND was prepared, the City of Mission Viejo in its capacity as Lead Agency has not yet adopted a VMT metric as the significance criteria for evaluating a Project’s traffic impacts. Further, and as discussed under Threshold a, operation of a congregate care/assisted living facility at the Project site would generate less daily traffic trips as compared to the existing commercial/retail uses. It is expected the Project would also reduce VMT. The Project would not conflict with CEQA Guidelines Section 15064.3 subdivision (b). No impact would result and no mitigation is required.

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

No Impact. Project-related construction or operation would not require the construction of new roadways and the existing configuration of the roadways within the vicinity of the Project site would remain



unchanged; therefore, impacts related to sharp curves or dangerous intersections would not occur. Further, as discussed previously, the Project would include removal of an existing driveway serving the Project site along Marguerite Parkway, reducing potential hazards. As discussed under Threshold d, the new access driveway at the southern end of the Project site would be for emergency access vehicles only.

Improvements planned as part of the Project would be in conformance with applicable City of Mission Viejo standards and would not result in any hazards due to a design feature. Additionally, the Project would be compatible with existing and planned land uses in the surrounding area and would not substantially increase safety hazards due to incompatible uses. No impact would result and no mitigation is required.

d) *Would the Project result in inadequate emergency access?*

Less than Significant Impact. Under existing conditions, adequate emergency access is provided within the vicinity of the Project site via existing roadways, including Marguerite Parkway and Avery Parkway. Emergency access may be temporarily impacted during construction along Marguerite Parkway; however, implementation of a Traffic Control Plan, as required by RR TRF-1 would ensure this impact is less than significant. The Project would include two driveways along Marguerite Parkway. The southern driveway is dedicated to emergency vehicle access, and removal traffic bollards would be installed to ensure other vehicles do not use this access. This emergency vehicle access has been designed in accordance with applicable OCFA and City of Mission Viejo codes and requirement. No component of the Project would require the temporary or permanent closure of a roadway accommodating emergency access. Accordingly, the Project would not result in inadequate emergency access and no impact would occur.

Mitigation Measures

Implementation of the Project would not result in impacts related to transportation; therefore, no mitigation measures are required.

**3.4.18 Tribal Cultural Resources**

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defines 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>a) Listed or eligible for listing in the California Register of Historical resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1? In applying for the criteria set forth in (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Listed or eligible for listing in the California Register of Historical resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying for the criteria set forth in (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?**

No Impact. As discussed in Threshold a in Section 3.4.5, Cultural Resources, of this IS/MND, a cultural resources records search and literature review was undertaken at the SCCIC at CSUF. Based on this search and review of existing literature related to cultural resources within the Project site, no tribal cultural resources listed or eligible for listing in the CRHR, or in a local register for historical resources, were identified. Further, the records search and literature review did not identify any known significant tribal cultural resources on near the Project site.

Assembly Bill 52 (AB 52), which became effective on July 1, 2015, requires lead agencies to provide notice to Native American tribes that are traditionally and culturally affiliated with the geographic area of a Project if they have requested notice of Projects proposed within that area. The City of Mission Viejo provided notice to the following Native American Tribes on September 19, 2019: Juaneño Band of Mission Indians Acjachemen Nation, Soboba Band of Luiseño Indians, Agua Caliente Band of Cahuilla Indians, Juaneño Band of Mission Indians, Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, La Jolla Band of Luiseño Indians, Soboba Band of Luiseno Indians, Pechanga Band of Luiseño Indians, San Luis Rey Band of Mission Indians.



During the AB 52 consultation process for this IS/MND, one Native American tribe contacted the City of Mission Viejo. The Rincon Band of Luiseño Indians, in a letter dated October 1, 2019, indicated that the Project site is not within the Luiseño Aboriginal Territory; consultation was not requested. No other tribes contacted by the City responded to the Project notification or request consultation with the City. The required AB 52 consultation process has been completed.

During preparation of the Cultural Resources Survey for the Project (included in Appendix B of this IS/MND), BFSA also requested a records search of the Sacred Lands File (SLF) search of the NAHC, which did not indicate the presence of any sacred sites or locations of religious or ceremonial importance within the project. The search was positive, indicating the presence of Native American cultural resources within the general area. In accordance with the recommendations of the NAHC, BFSA contacted all Native American consultants listed in the NAHC response letter informing the tribes about the nature of the Project. BFSA received two responses. Both the Agua Caliente Band of Cahuilla Indians and the Pala Band of Mission Indians stated that the Project is not located within their Traditional Use Areas and deferred to other tribes more local to the area. No tribes identified the potential for impacts to tribal cultural resources.

Accordingly, implementation of the proposed Project does not have the potential to cause substantial adverse changes in the significance of a tribal cultural resource(s) as defined in Public Resources Code Section 21074 during construction; no impacts would occur.

Mitigation Measures

Implementation of the Project would not result in impacts related to tribal cultural resources; therefore, no mitigation measures are required.



3.4.19 Utilities and Service Systems

Environmental Issue Areas Examined	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) <i>Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) <i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) <i>Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Requirement

RR SW-1 Pursuant to Section 6.10.1100 of the City of Mission Viejo Municipal Code, prior to issuance of a construction or demolition permit, the Project Applicant shall submit a Waste Diversion Plan to the City's Building Official, or designee, that details the Project's compliance with the City's waste diversion requirements. The Waste Diversion Plan shall demonstrate that at least 75 percent of the construction and demolition waste generated by the construction activities would be diverted from disposal at a landfill, unless a lesser amount is approved by the Building Official.

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

Less than Significant Impact. As previously described in Section 2.3.4, Utility Infrastructure, municipal and private utility services necessary to serve the Project are currently existing in the roadways adjacent to the Project site, as summarized below.



- **Water and Sewer.** Water and sewer service to the Project site is provided by MNWD. There is an existing 14-inch water line on the west side of Marguerite Parkway and an existing 8-inch water line and public fire hydrant on the south side of the southern driveway. The 8-inch water service line would serve the Project. There is an existing 10-inch sewer line on the east side of Marguerite Parkway and a 6-inch sewer lateral enters the site through the southern driveway; the 6-inch sewer later would serve the Project. Based on a review of the MNWD's 2015 UWMP, there are no recycled water lines currently available to serve the Project site (MNWD, 2015). Based on water consumption and wastewater generation factors established by MNWD (MNWD, 2019a), the Project would consume approximately 31,770 gallons per day (gpd) of water and generate approximately 30,050 gpd of wastewater. It is estimated, based on MNWD water consumption and wastewater generation factors, that the existing uses consume approximately 3,475 gpd of water and generate approximately 3,281 gpd of wastewater. Therefore, based on MNWD's consumption and wastewater generation factors, the Project would generate a net increase in water consumption of approximately 28,925 gpd, and a net increase in wastewater generation of approximately 26,769 gpd. MNWD has indicated that it is not anticipated that water or sewer lines would need to be upgraded (MNWD, 2019b)
- **Storm Drains.** The Project site currently sheet flows from east to west, and stormwater from the Project site is intercepted in an existing 28-foot catch basin within Marguerite Parkway, which connects to an existing 48-inch storm drain line in Marguerite Parkway. As part of the Project, the existing catch basin in Marguerite Parkway would be relocated to the north to accommodate the emergency access driveway at the southwest corner of the Project site. An on-site storm drain and water quality management system would be installed and would continue to discharge to the storm drain system in Marguerite Parkway. Off-site flows from the easterly slope are currently conveyed via an existing storm drain along the eastern and southern perimeter of the Project site. With the Project, this system would be conveyed through a new storm drain line along the north entrance driveway toward Marguerite Parkway and then conveyed south, where it would connect with the existing storm drain in Marguerite Parkway at the southern corner of the Project site. As further discussed in the Hydrology and Water Quality Section of this IS/MND, the Project would result in similar stormwater flows as compared to existing conditions and would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, including the storm drain system in Marguerite Parkway, which serves the Project site.
- **Electric, Natural Gas, and Telecommunications.** SDG&E provides electricity to the existing Project site and would serve the Project via a 12kV underground service that runs along the northern side of the Project site within the access easement along the northern side of the Project site. There is an existing electric transformer in the eastern parking lot that would be relocated to the northeast corner of the Project site, adjacent to the proposed emergency generator that would be located east of the service driveway. SCG provides natural gas to the Project site and has a 12-inch high-pressure gas line and a 6-inch gas line on the east side of Marguerite Parkway. A 2-inch gas line located within the access easement would also serve the Project. The Energy section of this IS/MND discusses the energy demands from the Project. Telephone, cable television, and internet services are provided by Cox Business. Service connections for the Project would be made from existing utility lines on Marguerite Parkway, with new lines placed underground. With the exception of new dry utility infrastructure on-site to serve the Project, which would connect to existing utility lines adjacent to the Project site, and



relocation of the existing transformer, no new or expanded dry utility infrastructure is required to serve the Project.

In summary, the on-site utility infrastructure necessary to serve the Project—including water, sanitary sewer, drainage, water quality treatment, and dry utilities (e.g., electricity, natural gas, cable)—would be installed within the Project site and would connect to the existing utility lines within the adjacent roadways. No new or expanded utility lines or facilities are required off-site, except as needed for the utility connections. The physical impacts that would result from the installation of utility infrastructure have been addressed in the analysis presented throughout this IS/MND and would be less than significant. No additional impacts would occur and no additional 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. Senate Bill (SB) 610 (Section 10910 et seq. of the California Water Code) requires land use planning entities, when evaluating certain large development projects, to request a water supply assessment (WSA) from the entity that would provide water to the project. The WSA must be prepared in conjunction with the land use approval process associated with a project and is required for any project that is subject to CEQA and meets certain criteria relative to size (e.g., a residential development of more than 500 dwelling units). The Project does not meet the requirements for preparation of a WSA.

As discussed above, MNWD provides water service to the Project site and based on water generation factors established by MNWD, the Project would generate a net increase in water consumption of approximately 28,925 gpd (approximately 32.4 acre-feet per year [afy]). According to its 2015 UWMP, MNWD's primary sources of water supply are imported potable water (approximately 75 percent) and recycled water (approximately 25 percent). The District's potable demands are supplied from imported sources via the Metropolitan Water District of Southern California (MWDSC). In an average year, approximately 43 percent of the District's imported water supply is delivered via the State Water Project and the remaining 57 percent is delivered via the Colorado River Aqueduct. The recycled water supply is locally sourced and has steadily increased to account for almost 25 percent of the overall water supply in the MNWD. The 2015 UWMP reports that in 2015 the actual total water demand for potable and raw water in the MNWD was approximately 26,824 afy, and the projected water demand for 2040 is 25,250 afy. This projection takes into consideration MNWD's policy approaches for conservation, improvements in technology, revisions in usage estimates for new development, and long-term adjustments in demand as customers respond to pricing signals. (MNWD, 2015)

The Project's estimated water demand of approximately 32.4 afy would represent a negligible amount (approximately 0.1 percent) of the total potable and raw water demand projected in 2040. The 2015 UWMP concludes that MNWD is prepared to meet the existing and projected demands for the 20-year outlook of the 2015 UWMP (MNWD, 2015). There would be sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years. This impact is less than significant and no mitigation is required.



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. Wastewater flows from the Project site are treated at the JB Latham Treatment (JBLTP) located at 34156 Del Obispo Street in the City of Dana Point. The JBLTP is owned and operated by the South Orange County Wastewater Authority (SOCWA), of which the MNWD is a member agency. The JBLTP has a total capacity of 13 million gallons per day (mgd), with approximately 6.7 mgd current used (SOCWA, 2019). MNWD currently discharges 1.4 mgd of flow to the JBLTP, with a capacity of 3 mgd of liquids and 4 mgd with solids (MNWD, 2019c). The wastewater generated from the Project (estimated at 0.03 mgd) would represent approximately one percent of MNWDs remaining daily capacity at the JBLTP, and approximately 0.5 percent of the total remaining capacity at the JBLTP. Therefore, there is adequate capacity at the JBLTP to treat wastewater from the Project site (MNWD, 2019c). This impact is less than significant and no mitigation is 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 Mission Viejo Public Works Department provides a wide range of services to the City, including waste collection. Within Mission Viejo, the collection of solid waste is contracted to Waste Management of Orange County (City of Mission Viejo Public Works, 2019). OC Waste & Recycling manages the solid waste disposal system for all the incorporated and unincorporated areas in Orange County, and owns and operates three active landfills and four household hazardous waste collection centers (OC Waste & Recycling, 2019a). Solid waste generated at the Project site would be disposed of at one of the three landfills operated by OC Waste & Recycling. The Prima Deshecha Landfill located at 32250 Avenida La Pata is closest to the Project site. The Prima Deshecha Landfill is permitted to accept up to 4,000 tons of solid waste per day and currently accepts a daily average of approximately 1,400 tons of solid waste per day (CalRecycle, 2019a). As such, the landfill has an excess capacity of approximately 2,600 tons of solid waste per day.

It is estimated that demolition of the existing 38,600 gsf building and surface parking lots would generate approximately 1,570 tons of solid waste. Additionally, based on the USEPA's residential construction waste generation rate of 4.39 pounds per square foot (lbs/sf) (EPA, 2003), the proposed 166,000 gsf of new construction would generate approximately 364 tons of solid waste. Therefore, it is estimated that the proposed construction activities would generate approximately 1,934 tons of debris. However, Section 6.10.1100 of the City's Municipal Code requires that 75 percent of solid waste be diverted from disposal at a landfill and that Waste Diversion Plans be developed to demonstrate how this will be accomplished. As required, a Waste Diversion Plan would be prepared for the Project (refer to RR SW-1) and would reduce the amount of construction and demolition waste being disposed at a landfill to approximately 484 tons over the estimated 18-month construction period, this represents approximately 1.3 tons per day, a nominal amount (0.05 percent) of the remaining daily capacity at Prima Deshecha Landfill.

Based on solid waste generation rates published by CalRecycle (CalRecycle, 2019b), it is estimated the Project would generate 1,548 pounds per day (ppd) of solid waste⁶. The existing uses at the Project site

⁶ Solid waste generation factors used: 8.6 ppd for each unit (132 units), 0.005 pounds/sf/day for restaurant (dining), and 6 ppd per 1,000 sf of office and amenity uses.



are estimated to generate 297 ppd of solid waste, resulting in a net increase of approximately 1,251 ppd of solid waste generation (0.63 tons per day). This solid waste production of the Project would represent only a nominal amount (approximately 0.02 percent) of the remaining daily permitted capacity at the Prima Deshecha Landfill. The City of Mission Viejo contracts with Waste Management of Orange County to provide solid waste management and recycling services in the City and compliance with regulations addressing solid waste is discussed below under Threshold e. With adherence to mandatory solid waste management requirements, the amount of solid waste generated would actually be less.

In summary, the solid waste generated by the Project during construction and operation would constitute less of the remaining daily available capacity at the Prima Deshecha Landfill and would not cause the capacity of the Prima Deshecha Landfill to be exceeded. The Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure. The Project would not otherwise impair the attainment of solid waste reduction goals. Therefore, the Project would result in a less than significant impact to solid waste and landfill facilities, and no mitigation would be required.

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

No Impact. Federal, State, and local statutes and regulations regarding solid waste generation, transport, and disposal are intended to decrease solid waste generation through mandatory reductions in solid waste quantities (e.g., through recycling and composting of green waste) and the safe and efficient transport of solid waste. The Project would be required to coordinate with Waste Management of Orange County to develop a collection program for recyclables, such as paper, plastics, glass, and aluminum, in accordance with local and State programs. Notably, Waste Management of Orange County provides commercial and multi-family bin collection services for properties in the City, and assists businesses with adhering to applicable waste management requirements, such as AB 241 (requires commercial businesses and public entities that generate four or more cy per week of waste and multi-family housing complexes with five or more units to adopt recycling practices) and AB 1826 (requires businesses that generate a specified amount of organic waste per week to arrange for recycling services for that waste).

Additionally, the Project would be required to comply with applicable practices enacted by the City under the California Integrated Waste Management Act of 1989 (AB 939) and any other applicable local, State, and federal solid waste management regulations. AB 939 created the California Department of Resources Recycling and Recovery Board now known as CalRecycle. AB 939 required that local jurisdictions divert at least 50 percent of all solid waste generated by January 1, 2000. The diversion goal has been increased to 75 percent by 2020 by SB 341. Further, the Solid Waste Disposal Measurement Act of 2008 (SB 1016) was established to make the process of goal measurement (as established by AB 939) simpler, more timely, and more accurate. SB 1016 builds on AB 939 compliance requirements by implementing a simplified measure of jurisdictions' performance. SB 1016 accomplishes this by changing to a disposal-based indicator—the per capita disposal rate—which uses only two factors: (1) a jurisdiction's population (or in some cases employment); and (2) its disposal, as reported by disposal facilities.

In 2017 (the last year data was approved), the City implemented 52 programs to reduce solid waste generation and achieve the increased solid waste diversion required. These programs involve composting, facility recovery, household hazardous waste, policy incentives, public education, recycling, source reduction, special waste materials, and transformation (CalRecycle, 2019c). The City had an average disposal rate of 3.8 pounds per resident per day and 10.6 pounds per employee per day in 2017, which is



less than disposal rate target of 5.7 pounds per resident per day and meets the disposal rate target of 16.0 pounds per employee per day (CalRecycle, 2019d). Therefore, the City is in compliance with AB 939 goals.

The *CalGreen Code* requires all new developments to divert 65 percent of non-hazardous construction and demolition debris for all Projects. However, as identified under Threshold d, above, the City requires 75 percent diversion of construction and demolition debris. In compliance with these regulations, the Project contractor would submit a Waste Diversion Plan to the City (refer to RR SW-1).

The Project would be required to comply with all applicable solid waste statutes and regulations; therefore, no conflict with these requirements would occur. No impact would result and no mitigation is required.

Mitigation Measures

Implementation of the Project would not result in any significant impacts related to utilities and service systems; therefore, no mitigation measures are required.



3.4.20 Wildfire

Environmental Issue Areas Examined	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:				
<i>a) Substantially impair an adopted emergency response plan or emergency evacuation plan?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>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?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*
- 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?*
- 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?*
- 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. The State Responsibility Area (SRA) is the land where the State of California is financially responsible for the prevention and suppression of wildfires. The SRA does not include lands within city boundaries or in federal ownership; therefore, the Project site is not within an SRA. Based on review of Figure PS-6, City of Mission Viejo Emergency Facilities Map, of the General Plan Public Safety Element, the Project site is not within a Very High Fire Hazard Severity Zone (VHFHSZ) (City of Mission Viejo, 2009). Similarly, according to the California Department of Forestry and Fire Protection (CalFire), the Project site is not located within VHFHSZ (CalFire, 2012). As such, no impacts related to wildfire would occur and mitigation is not required.



Mitigation Measures

Implementation of the proposed Project would result no impacts related to wildfire; therefore, no mitigation measures are required.



3.4.21 Mandatory Findings of Significance

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the Project:				
a) <i>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 period of California history or prehistory?</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <i>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.)</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) <i>Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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 period of California history or prehistory?*

Less than Significant with Mitigation Incorporated. The western portion of the Project site is currently developed with a commercial/retail building and associated surface parking lots and the eastern portion of the Project site is an engineered slope. There is a limited amount of ornamental landscaping throughout the Project site. As discussed in the Biological Resources section of this IS/MND, the Project would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. MM BIO-1 ensures that potential construction-related impacts to nesting birds during the breeding season would be less than significant.

As indicated in the Cultural Resources Section of this IS/MND, the existing building on the Project site is not included on the National Register of Historic Places, California Register of Historical Resources, or a local register of historical resources, nor is it eligible for listing. Therefore, there would be no impact to



historical resources resulting from Project implementation. The area that would be physically impacted during construction of the Project has been previously disturbed and the potential to impact archaeological resources (historic or prehistoric) is considered less than significant. However, the Project site is an area with high paleontological sensitivity. Potential impacts to paleontological resources, if encountered during construction, would be less than significant with implementation of MM GEO-2.

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 with Mitigation Incorporated. As identified through the analysis presented in this IS/MND, with adherence to regulatory requirements and implementation of Project-specific mitigation measures, the Project would have no impact or less than significant impacts related for each topical issue. Because Project impacts would be less than significant after mitigation, impacts associated with the Project would not result in cumulatively-considerable impacts when added to the impacts of other Projects planned or proposed in the vicinity of the site. Cumulative impacts would be less than significant.

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

Less than Significant with Mitigation Incorporated. The Project's potential to result in environmental effects that could adversely affect human beings, either directly or indirectly, is discussed throughout this IS/MND. Notably, with the reduction in trip generation resulting from the Project, compared to the trips generated by the existing uses on at the Project site, operational traffic, noise, air quality and GHG impacts would also be reduced and would be less than significant. Construction-related impacts would also be less than significant. The Project would not cause substantial adverse effects on human beings, either directly or indirectly.



4.0 Mitigation, Monitoring, and Reporting Program

REGULATORY REQUIREMENTS AND MITIGATION MEASURES	RESPONSIBLE PARTY / MONITORING PARTY	IMPLEMENTATION STAGE	COMPLIANCE STATUS
BIOLOGICAL RESOURCES			
<p>MM BIO-1 In the event that vegetation and tree removal should occur between February 1 and September 15, the Project Applicant (or its contractor) shall retain a qualified biologist to conduct a nesting bird survey no more than 3 days prior to commencement of construction activities. The nesting survey shall include the Project site and areas immediately adjacent to the site that could potentially be affected by project-related construction activities such as noise, human activity, and dust. If active nesting of birds is observed within 100 feet of the designated construction area prior to construction, the biologist shall establish suitable buffers around the active nests (e.g., as much as 500 feet for raptors and 300 feet for non-raptors [subject to the recommendations of the qualified biologist]), and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. Prior to issuance of a demolition permit, the Director of the Community Development Department, or designee, shall verify that all project grading and construction plans include specific notes regarding the requirements of the Migratory Bird Treaty Act (MBTA), that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field with orange snow fencing.</p>	<p>Project Applicant or Contractor/Director of Community Development, or Designee</p>	<p>Prior to issuance of a demolition or grading permit, whichever comes first</p>	
GEOLOGY AND SOILS			
<p>MM GEO-1 Prior to issuance of a grading permit, grading plan review shall be conducted by the Director of the Mission Viejo Community Development Department, or designee, to verify that recommendations/requirements specified in the <i>Geotechnical Exploration Report, Proposed Senior Housing Development</i>, prepared by Leighton and Associates in July 2019 (included in Appendix D of this IS/MND), have been appropriately incorporated into final Project design. These Project-specific</p>	<p>Project Applicant or Contractor/Director of Community Development, or Designee</p>	<p>Prior to issuance of a grading permit</p>	



REGULATORY REQUIREMENTS AND MITIGATION MEASURES	RESPONSIBLE PARTY / MONITORING PARTY	IMPLEMENTATION STAGE	COMPLIANCE STATUS
<p>design recommendations include, but are not be limited to the following:</p> <ul style="list-style-type: none"> • Earthwork • Foundation Design • Slab-on-Grade Floors • Temporary Excavations • Trench Backfill • Cement Type • Corrosion Protection Measures • Surface Drainage • Concrete Flatwork • Pavements • Earth Retaining Structures • Soldier Pile Buttress • Drilled Pier Construction Considerations • Exterior Concrete Flatwork • Additional Geotechnical Services <p>Design, grading, and construction shall be performed in accordance with the requirements of the City of Mission Viejo Building Code and the California Building Code (CBC) applicable at the time of grading, appropriate local grading regulations, and the recommendations of the geotechnical consultant as summarized in the Geotechnical Report.</p>			
<p>MM GEO-2 Prior to issuance of a grading permit, the Project Applicant shall retain a professional paleontologist to verify implementation of the mitigation measures below identified in the Paleontological Assessment, prepared by Brian F. Smith and Associates, dated July 8, 2019, and included in Appendix E of this IS/MND. Selection of the paleontologist shall be subject to the approval of the City of Mission Viejo Community Development Director and no grading activities shall occur at the site until the paleontologist has been approved by the City.</p>	<p>Project Applicant and Approved Paleontologist/Director of Community Development, or Designee</p>	<p>Prior to issuance of a grading permit</p>	



REGULATORY REQUIREMENTS AND MITIGATION MEASURES	RESPONSIBLE PARTY / MONITORING PARTY	IMPLEMENTATION STAGE	COMPLIANCE STATUS
<ul style="list-style-type: none"> Monitoring of mass grading and excavation activities in areas identified as likely to contain paleontological resources by a qualified paleontologist or paleontological monitor shall be conducted. Monitoring shall be conducted in areas of grading or excavation in undisturbed Miocene Capistrano Formation and the Miocene Capistrano Formation (TCs and Tn on the Figure 3 of the Paleontological Assessment, respectively), as well as where over-excavation of surficial alluvial sediments shall encounter these formational sediments in the subsurface. Monitoring is not required for artificial fill materials or the Pleistocene/Holocene young sandy axial channel deposits (Qya_a in Figure 3 of the Paleontological Assessment). However, monitoring of the Pleistocene very old sandy axial channel deposits (Qvoa_a in Figure 3 of the Paleontological Assessment) is required, should these deposits underlie the young channel deposits. Paleontological monitors shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediment that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources. Preparation of recovered specimens to a point of identification and permanent preservation (not display), including screen-washing of sediments to recover small invertebrates and vertebrates, if necessary. Identification and curation of specimens into a professional, accredited public museum repository with a commitment to 			



REGULATORY REQUIREMENTS AND MITIGATION MEASURES	RESPONSIBLE PARTY / MONITORING PARTY	IMPLEMENTATION STAGE	COMPLIANCE STATUS
<p>archival conservation and permanent retrievable storage (e.g., the Cooper Center in Santa Ana, Orange County, California). The paleontological program should include a written repository agreement prior to the initiation of mitigation activities. The Lead Agency may select another repository if it so desires.</p> <ul style="list-style-type: none"> Preparation of a final monitoring and mitigation report of findings and significance, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location. The report, when submitted to, and accepted by, the City of Mission Viejo, will signify satisfactory completion of the Project program to mitigate impacts to any potential non-renewable paleontological resources (i.e., fossils) that might have been lost or otherwise adversely affected without such a program in place. 			
HAZARDS AND HAZARDOUS MATERIALS			
<p>RR HAZ-1 Demolition and renovation activities shall be conducted in accordance with the remediation and mitigation procedures established by federal, State, and local standards including, but not limited to, the Federal and State Occupation Safety and Health Administrations (OSHA and CalOSHA, respectively) and South Coast Air Quality Management District (SCAQMD) regulations for the excavation, removal, and proper disposal of the asbestos containing materials. The materials shall be disposed of at a certified asbestos landfill. The Asbestos-Abatement Contractor shall comply with notification and asbestos-removal procedures outlined in SCAQMD’s Rule 1403 to reduce asbestos-related health risks. SCAQMD Rule 1403 applies to any demolition or renovation activity and the associated disturbance of asbestos containing materials. These requirements shall be included on the contractor specifications and verified by the Community Development Director, or designee, prior to the issuance of a demolition permit.</p>	<p>Project Applicant or Contractor/Director of Community Development, or Designee</p>	<p>Prior to issuance of a demolition permit</p>	



REGULATORY REQUIREMENTS AND MITIGATION MEASURES	RESPONSIBLE PARTY / MONITORING PARTY	IMPLEMENTATION STAGE	COMPLIANCE STATUS
<p>RR HAZ-2 Contractors shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1532.1, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to lead. Lead-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.</p>	<p>Project Applicant or Contractor/Director of Community Development, or Designee</p>	<p>Prior to issuance of a demolition permit</p>	
HYDROLOGY AND WATER QUALITY			
<p>RR WQ-1 The Project Applicant shall comply with the requirements of the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities in effect at the time Project construction is initiated. Prior to the issuance of a grading permit, the Project Applicant shall provide the City of Mission Viejo Director of Public Works, or designee, with evidence that a Notice of Intent (NOI) has been filed with the State Water Resources Control Board. Such evidence shall consist of a copy of the NOI stamped by the State Water Resources Control Board or the Regional Water Quality Control Board or a letter from either agency stating that the NOI has been filed.</p>	<p>Project Applicant or Contractor/Director of Community Development, or Designee</p>	<p>Prior to issuance of a demolition or grading permit, whichever comes first</p>	
<p>RR WQ-2 The Project Applicant shall submit a Final Water Quality Management Plan (WQMP) to the City of Mission Viejo Director of Public Works, or designee, for review and approval prior to issuance of grading and building permits. The Final WQMP shall be in compliance with the <i>National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from The Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region</i> in effect at the time a grading permit is issued, and Section 6.65.310 of the City of Mission Viejo Municipal Code. The Low Impact Development/Site Design, Source Control, and Treatment Control Best Management Practices (BMPs) specified in the Final WQMP shall be incorporated into the Project to reduce pollutants of concern in stormwater runoff from the Project site.</p>	<p>Project Applicant or Contractor/Director of Community Development, or Designee</p>	<p>Prior to issuance of a grading and building permits</p>	



REGULATORY REQUIREMENTS AND MITIGATION MEASURES	RESPONSIBLE PARTY / MONITORING PARTY	IMPLEMENTATION STAGE	COMPLIANCE STATUS
NOISE			
<p>MM NSE-1 The Project residential units are estimated to require a Noise Reduction (NR) of up to 27.5 dBA and a windows-closed condition requiring a means of mechanical ventilation (e.g. air conditioning). Since standard building construction typically provides a NR of 25 dBA, upgraded windows are required to provide the necessary NR, and reduce exterior traffic noise levels approaching 72.5 dBA CNEL at the building façade to satisfy the interior 45 dBA CNEL standard. The following NR measures are required to satisfy the 45 dBA CNEL interior noise level standard and shall be confirmed by the City of Mission Viejo prior to issuance of building permits:</p> <ul style="list-style-type: none"> • <u>Windows & Glass Doors</u> <ul style="list-style-type: none"> ○ Windows and glass doors of residential units (all floors) facing Marguerite Parkway and I-5, as shown on Exhibit ES-A, require upgraded minimum sound transmission class (STC) ratings of 30; ○ All other units require windows and glass doors with minimum STC ratings of 27. All windows and glass doors shall be well-fitted, well-weather-stripped assemblies. • <u>Exterior Doors (Non-Glass)</u>. All exterior doors shall be well weather-stripped. Well-sealed perimeter gaps around the doors are essential to achieve the optimal STC rating. All units require exterior doors with minimum STC ratings of 27. • <u>Walls</u>. At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal. • <u>Roof</u>. Roof sheathing of wood construction shall be per manufacturer’s specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer’s specification or well-sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space. 	<p>Project Applicant/ Director of Community Development, or Designee</p>	<p>Prior to issuance of a building permit</p>	



REGULATORY REQUIREMENTS AND MITIGATION MEASURES	RESPONSIBLE PARTY / MONITORING PARTY	IMPLEMENTATION STAGE	COMPLIANCE STATUS
<ul style="list-style-type: none"> Ventilation. Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code. 			
<p>MM NSE-2 The use of non-impact pile driving methods (e.g., drilling) shall be required when located within 150 feet of occupied commercial buildings represented by receiver location R4 on Figure 3-4) (commercial uses south of the Project site). This requirement shall be included on the contractor specifications and verified by the Director of Community Development, or designee, prior to issuance of a grading permit.</p>	Project Applicant or Contractor/Director of Community Development, or Designee	Prior to issuance of a grading permit	
TRANSPORTATION			
<p>RR TRF-1 Pursuant to Section 14.01.202 of the City of Mission Viejo Municipal Code, the Project Applicant shall obtain a permit from the Public Works Department prior to initiating any construction activities along Marguerite Parkway. Among other requirements, the permit application shall include a Traffic Control Plan, which shall describe in detail safe detours (for vehicles, pedestrians, and bicyclists) and shall provide temporary traffic control during construction activities.</p>	Project Applicant or Contractor/Director of Public Works, or Designee	Prior to initiation of construction activities in the public right-of-way along Marguerite Parkway	
UTILITIES AND SERVICE SYSTEMS (SOLID WASTE)			
<p>RR SW-1 Pursuant to Section 6.10.1100 of the City of Mission Viejo Municipal Code, prior to issuance of a construction or demolition permit, the Project Applicant shall submit a Waste Diversion Plan to the City's Building Official, or designee, that details the Project's compliance with the City's waste diversion requirements. The Waste Diversion Plan shall demonstrate that at least 75 percent of the construction and demolition waste generated by the construction activities would be diverted from disposal at a landfill, unless a lesser amount is approved by the Building Official.</p>	Project Applicant or Contractor/Building Official, or Designee		



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